Recommendation 1
To ensure it can adequately respond to funding levels that may vary from its business plan, the Authority should develop and publish alternative funding scenarios that reflect the possibility of reduced or delayed funding from the planned sources. These scenarios should detail the implications of variations in the level or timing of funding on the program and its schedule.

Response
Over the last two years, high-speed rail in California and the U.S. has received significant funding commitments including $9 billion resulting from the Proposition 1A bond measure passed by California voters in 2008 and the federal government's 2009 $8 billion American Recovery and Reinvestment Act (ARRA) high-speed and intercity passenger rail program, of which California received a commitment of $2.25 billion.

Additional project funding potentially includes $2.5 billion in 2010 additional federal stimulus appropriations for high-speed rail and $2.5 billion in 2011 based on Congress' 2010 budget, which may continue to 2011 under a "continuing resolution" of which California would expect to receive a portion. Potential funding also includes a proposed $1 billion each year for the next four years as part of the President's remaining five-year budget and up to $50 billion for a long-term high-speed rail program in the proposed reauthorization of the surface transportation program, a portion of which California would also expect to receive.

As stated in the Authority's April 19th response to the Bureau of State Audits, we agree that it is important to be aware of and plan for funding scenarios that differ from the funding plan presented in our December 2009 Business Plan. Currently we are working with the Authority's financial analysis consultant on the development of a number of funding scenarios, including best and worst case as well as staging and phasing of the system based on varying funding levels from all potential funding sources.

The development of these funding scenarios will require thoughtful consideration and planning. The Authority will report back to BSA on the progress we have made in the development of these scenarios and, if appropriate, will provide some preliminary results in the six-month audit response with a complete set of funding scenarios no later than the one year audit response.

Recommendation 2
In order to adequately plan for private investment, the Authority should further specify the potential costs of planned revenue guarantees and who should pay for them.

Response
Proposition 1A explicitly prohibits the use of bond proceeds for operating subsidies and further mandates that the funding plan required prior to the Authority's initial request for appropriation for a corridor or useable segment must indicate that the planned passenger service will not require a local, state or federal operating subsidy. Additionally, Proposition 1A requires an independent third-party report prior to commitment of bond proceeds for construction, real

property, and equipment expenditures for a corridor or useable segment. This third-party report must indicate that the planned passenger train service will not require an operating subsidy.

Currently staff is working with the Authority's financial consultant as well as its bond counsel to provide a discussion of what constitutes a "revenue guarantee" versus an operating subsidy versus a capital cost reimbursement and will provide a clear explanation of the difference as those terms apply to the high-speed train project. It will also identify how much any such guarantees would cost and which government entities might be responsible for those guarantees. This information will be included in the Authority's six month audit response to BSA.

Recommendation 3
In order to respond effectively to circumstances that could significantly delay or halt the program, the Authority should assure that it implements planned actions related to managing risk.

Response
As was noted in our initial response, the Authority hired a risk insurance manager in February 2010 to provide technical and managerial advice and consultation across the spectrum of risk management, project insurance and related industry issues as they pertain to risks inherent in the California High-Speed Rail Program.[1]

Further, the Program Manager has revised its risk register and development protocol[2]. The revised risk management protocol provides guidance to regional teams for preparation of lists of uncertain future events that have the potential to impact project objectives. These potential risk lists, or risk registers, contain all individually identified risks to a regional team's schedule and budget to develop a picture of the challenges facing the project.

In addition, the Organizational Assessment Report prepared by the Authority's organization consultant identified a key position of Project Controls and Risk Management. Staff will identify the specific duties, knowledge, skills and abilities required of a project controls and risk management position and will seek authorization for the position of Manager, Project Control and Risk Management in the Authority's 2011-12 budget. Upon approval of the position, staff will develop a timeline for filling the position.

Finally, the Authority is in the process of establishing an internal audit office that will report to the Chief Executive Officer and the Audit Committee of the Board. Staff recently developed a draft charter[3] for the internal audit office and is currently developing duty statements to identify the duties, knowledge, skills and abilities of the audit staff. The Authority has proposed funding in the 2010-11 state budget for these positions with the intention of filling these positions by August 2010, pending final budget approval. The addition of the internal audit office will significantly aid the Authority in identifying risks to its contracting processes as well as the internal control environment.

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[1] The insurance risk manager's task schedule
[2] The Risk Register and Development Protocol document
[3] The draft charter for the internal audit office

Recommendation 4
To avoid possible legal challenges, the Authority should ensure that the peer review group adheres to the Meeting Act or seek a formal opinion from the Office of the Attorney General regarding whether the review group is subject to this act.

Response
The Authority has received an informal advice memorandum from its legal counsel, a deputy attorney general, stating that the Peer Review Group is not subject to the Open Meeting Act. A copy of the memorandum was furnished to the auditors and is also attached to this response.[4] The following needs clarification, since the Peer Review Group is described in the law as being "independent," and is composed of members appointed by other officials and not by the Authority, and reports to the Legislature, it is not clear that the Authority has the power to determine how the Peer Review Group should function, especially since to do so might be viewed as an interference in the process contemplated by the Legislature. As for a formal opinion of the Attorney General, obtaining such an opinion is both costly and time-consuming. The Authority requested an opinion on another aspect of AB 3034 in September 2007 and received a response on February 2009. Consequently, we recommend that the Legislature clarify the law or, at least as an initial step, request further legal guidance from the Legislative Counsel. We have also written to the author of Assembly Bill 3034, Ms. Galgianni, in an effort to seek clarification of the issue. A copy of our letter to her is also attached.[5] Staff will continue to work with the Authority's legislative contacts to obtain clarification of the purposes and operational procedures the Legislature intended with regard to the Peer Review Group.

Recommendation 5
To ensure that it does not run out of funds for administrative and preconstruction activities prematurely, the Authority should track expenditures for these activities and develop a long-term spending plan for them. It should also develop procedures and systems to ensure it complies with Recovery Act requirements.

Response
The Authority's computer system has been enhanced to include a system for tracking administrative and program expenditures and mechanisms for tracking compliance with Recovery Act requirements.[6] The enhancement was brought online on May 28th and contains current contract and invoice information. Full implementation of the system will be realized when historical invoice information is entered into the system on or before the six month BSA response.

The system segregates the administrative and preconstruction expenditures and, when fully implemented, will provide updates of expenditures versus forecasts. To allocate administrative costs associated with Authority operations such as salaries and benefits, rent, general expenses, etc., the system will include the Department of Finance uniform cost code scheme, and expenditures will be entered into the system under the appropriate cost codes. To allocate

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[4] Informal advice memorandum
[5] Copy of letter to Ms. Galgianni
[6] The statement of work for the tracking system to be implemented by the Authority's information technology contractor

preconstruction expenditures, the system will use Work Breakdown Structure (WBS) and project cost codes based on tasks specified in the program management contract. The system will enable Authority staff to develop long-term spending plans and track expenditures to forecasts. Administrative forecasts will be developed and input into the system by Authority staff. The program forecasts will be developed by the Program Manager in consultation with the Authority Executive staff and will be input into the system for tracking. The system will alert staff when specific expenditure categories are projected to exceed forecast expenditure levels.

The program management contractor now develops spending plans and cost projections for each year of pre-construction activities based on tasks included in the contract. The program management staff submits to their management weekly timesheets which are the basis for tracking expenditures specified in the contract tasks. Overall expenditures are measured against expenditure forecasts to identify areas where they may exceed forecasts and to measure progress toward goals. When the Authority's system is fully implemented, regional contactors and regional managers will provide all contract related information, including expenditures related to invoices and contract tasks and verification of regional manager invoice approval, for entry into the system.

Recommendation 6
The Authority should participate in the development of key policy documents, such as the authority's business and strategic plans. Further, Authority members should adhere to their policies and procedures, including those outlining how they may communicate with contractors.

Response
The Business Plan and the Strategic Plan, are the Authority's key policy documents and will be presented to the board at the July 2010 meeting for adoption and incorporation into the Board's formal policies and procedures.

The Business Plan comprises the project's details and scope, including projected engineering and construction timelines, funding plan and strategies, and all aspects of a planned organizational approach to implementing the project. The Strategic Plan is a 5-year planning document that outlines the overarching mission, vision and values of the organization, as well as the chief long-term organizational and policy goals along with strategies and tools to meet those goals. Together, the Business Plan and Strategic Plan represent what the Board considers to be "key policy" documents.

The Authority members will be reminded of all of the adopted policies governing the board and, in particular, the policy that relates to communications with contractors.

Recommendation 7
In order to ensure that staff receives relevant information on the status of the program, the Authority should amend the project oversight consultant's work plan to include a critical review of the progress reports for accuracy and consistency. Authority staff should also request that the Program Manager revise its progress reports to include information on the status of contract products and services.

Response

The project management oversight consultant, hired in January 2010, has included in its work plan, provisions requiring the critical review of the program management contractor's progress reports, including requirements that the reports contain a discussion of overall program status, key issues, significant accomplishments, progress and cost, and any work performed outside the scope of the approved work program. These provisions will ensure accuracy and consistency in the Program Manager's progress reports.[7] The program manager has already revised its progress report format and process to ensure that the reports accurately reflect the status of project products and services.[8]

Recommendation 8

To determine if it is paying invoices that accurately reflect work performed, the Authority should ensure that staff adheres to controls for processing invoices. For example, staff should not pay invoices from regional contractors until they receive notification from the Program Manager that the work billed has been performed, or until they have conducted an independent verification.

Response

The Authority appreciates BSA's identification of the lack of full compliance with the Authority's controls for processing invoices. The Authority currently has implemented the following controls to ensure that all invoices receive all of the approvals required before submittal to the State Controller's Office (SCO) for payment:

- The Program Manager has developed a system for review, verification and approval of all regional contractor monthly progress reports and invoices[9]. This review consists of the Program Manager's regional manager review of the progress reports and invoice against actual work performed and a report of concurrence or dispute via a web based project repository.
- The Program Manager's regional managers submit, via email, to the appropriate Authority staff, their approval or non-approval of the regional contractor's invoices.
- The Authority staff has developed and implemented a formal written notification of the approval of invoices[10] which requires sign off by all parties prior to payment. This notification will be included with every invoice submitted to SCO for payment.

When the Authority's expenditure tracking system is fully implemented, regional contractors will post invoices and supporting documentation to the system and regional managers will also verify that invoice amounts correspond to work performed via the system for review and approval by Authority staff.

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[7] The Authority's direction to the project oversight consultant

[8] The revisions the Program Manager has made to the monthly progress reports include an environmental milestone schedule with the percent of completion toward the NOD/ROD; a key issues summary; and Program Manager and Regional Consultant highlights by project section. Revisions underway but not yet compete include improvements to regional consultant section summary schedules and improvements to the Program Manager's monthly schedule.

[9] A description of the system and a system flowchart

[10] Copy of the written approval notification form

Recommendation 9
To ensure that it does not misuse public funds and can hold contractors accountable, the Authority should adhere to conditions of its contracts and work plans, and make any amendments and modifications in writing.

Response
The Authority appreciates BSA identifying the lack of formalizing changes in the scope of work in some Authority contracts. While these undocumented changes were critical to the project, we recognize that they were not included in contract language and that the problem must be corrected. In the future Authority staff will ensure that all changes to tasks not included in contracts' scope of work are memorialized through formal amendments to the agreements.

To rectify the issues identified in BSA's audit, Authority staff has prepared a contract amendment for execution by July 2010 with AECOM (formerly DMJM) adding the Vision California task to their scope of work. Additionally, Authority staff is in the process of preparing a contract amendment for the Parsons Brinckerhoff agreement formalizing the verbal commitment regarding the office space issue and the related reduction in overhead rates for the provided space. Please note, that although there were no formal terms in the original agreement, Parsons Brinckerhoff has been using a substantially reduced overhead rate for those employees being housed in the Authority's office since the inception of the contract. This reduced rate (field rate) will be formally defined and addressed through a contract amendment, which will be fully executed in July 2010.

Recommendation 10
To determine if payment controls are implemented, the authority should ensure its written policies and procedures reflect intended controls over invoice processing and offer sufficient detail to guide staff. These procedures should include steps for documenting implementation of invoice controls.

Response
Authority staff is in the process of amending its contract administration manual to include appropriate controls over invoice processing. The controls will include a description of the invoice payment process, the parties responsible for reviews and verifications, and the procedures for resolving invoice discrepancies. The contract administration manual will provide specific details on the process the Authority expects the program manager to use in its review and approval of invoiced amounts and will require staff to ensure that the process is used by the program manager.

The contract administration manual will also provide policies developed to deal with funds provided under the American Recovery and Reinvestment Act. As previously noted, the Authority's expenditure tracking system will generate information required by the act, such as funds received and expended, estimated jobs created and information about infrastructure investments. The policies will cover controls over processing funds received and expended, including reviews and approvals for those actions, as well as other data required by the act.

The update of the contract administration manual will be completed on or before the six month audit response.

Footnote #1

Attachment B
Task/Schedule/Budget

Task	Schedule	Estimated Hours	Estimated Cost
A. Initial Assessment of Current Program and Plans for Developing the CAHSR Program. *Assessment of the current program and plans from risk assessment perspective.*	March 2010	12hrs	$1,440.00
B. Preliminary Recommendations on Risk Management Approaches. *Identification of relevant approaches with emphasis on assessment of an Owner Controlled Insurance Program (OCIP). Preparation of draft findings and recommendations report for Authority review.*	April 2010	20 hrs	$2,400.00
C. Review and Evaluation of Potential Contract Clauses for Risk Exposure *Provision of advice on relevant contract clauses for procurement, design and construction services to assist in containing Authority's risk.*	Continuous	10 hrs	$1,200.00
D. Utilization of Best Efforts to Develop a Strategy for Managing CAHSR Program Risk. *Provision of preliminary outline of proposed strategy to manage CAHSR Program risk.*	Preliminary Outline 45 Cal. Days fm commencing work under Scope 1), c.	32 hrs	$3,840.00

E. On-going Expert Advice.	Continuous	13 hrs	$1,560.00
F. Assist Implementation of Designated Sections of Approved Strategy. *Sections selected for implementation may be all or a portion of the strategy.*	To be agreed	100 hrs	$12,000.00
G. Other Direct Costs that support above tasks	As needed	N/A	$1,000.00

Total = $23,440.00

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California High-Speed Train Project

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TECHNICAL MEMORANDUM

RISK REGISTER DEVELOPMENT PROTOCOL
for Regional and Core Systems Teams
TM 0.6

Prepared by: ___*Signature on file*___   ___01Mar 10___
Noel R Berry   Date

Checked by: ___*Signature on file*___   ___01 Mar 10___
Joe O'Carroll   Date

Approved by: ___*Signature on file*___   ___01 Mar 10___
Ken Jong, PE, Engineering Manager   Date

Released by: ___*Signature on file*___   ___07 Mar 10___
Anthony Daniels, Program Director   Date

Revision	Date	Description
0	18 Jun 07	Initial Release
1	01 Mar 10	Major revision to include development protocol

Note: Signatures apply for the latest technical memorandum revision as noted above.

Prepared by **PB**
for the California High-Speed Rail Authority

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TABLE OF CONTENTS

1.0 PROGRAMMATIC RISK MANAGEMENT AND RISK REGISTER DEVELOPMENT

The purpose of this memorandum is to define objectives and protocols for the development of risk registers by regional teams for the implementation of a consolidated risk management process consistent with the scope and magnitude of the California High Speed Train Project (CHSTP). It is intended to provide more specific guidance to the regional teams in development of their individual risk registers and, more generally, carrying out risk management efforts in line with the principles and methodology provided in the program's Risk Management Plan. This Risk Register Protocol (RRP) memorandum is considered to be living document and will be periodically revisited and modified as necessary.

Risk Management encompasses all aspects of the identification, assessment, analysis and management of risk (both threats and opportunities). We have a broad definition of what is meant by risk. A "risk" is an uncertain future event – internal or external – with the potential to impact the project objectives. "Risk Management" is an explicit, systematic process to identify, assess and manage these uncertain events, so as to maximize the chances of achieving the program (and regional project) objectives. The protocols described in this memorandum support risk management by systematizing the efforts to identify risks and develop and communicate action plans, as embodied by the risk register. As such, the risk management process as a whole helps us understand and manage the relationships between the business environment, our strategic objectives, the risk to achieving these objectives, and our actual performance.

The primary risk management deliverable for the regional teams is the risk register. The risk register will contain all individually identified risks to the team's budget or schedule, including, as necessary, system safety risks with the potential to impact cost and/or schedule. It will be developed in conjunction with the cost and schedule estimates and together, these should provide a complete picture of not only what is intended with regards to cost and schedule, but challenges (and opportunities) with the potential to affect these plans.

PMT Risk Analysts will integrate the information developed by the Regional teams in the risk registers with cost and schedule estimates and risks identified by other elements of the program team to develop a complete picture of the challenges facing the project and inform contingency levels. In addition, this process will established levels of confidence for particular cost and schedule outcomes to better understand and communicate the potential impacts of 'scope-creep' and other issues to the Authority.

The risk registers themselves serve two basic functions:

1. It is an action plan – a complete risk register is not limited to an identification or assessment of risks, it must specify what is being done by the project team to overcome these challenges, who is responsible for doing it and when it will be done.
2. It is a communication tool – it provides a concise summary of the challenges currently facing the project together with the what, who and when of their management for other team members and regions as well as management and the Authority.

All processes and protocols presented in this memorandum are intended to serve one or both of the above functions and all risk register development efforts should be carried out with them in mind.

Figure 1 summarizes the risk register development process, principles and objectives intended to support these two core functions. They are discussed in more detail in the following sections.

Risk Register Development Process

Principles

- Ownership - each group, function, and/or team will comply with and embed Project requirements, process and procedures for risk management; risks will be held by individuals at the lowest organizational level for which management is feasible.
- Business alignment – all key decisions supported by explicit consideration of risk with balanced consideration of safety, regulatory and commercial factors.
- Action oriented – risks and opportunities linked to response plans with timely tracking of actions.
- Review – risk management processes will be documented and included in the management system.
- Reporting – on risk and the effectiveness of associated key controls and risk responses, following normal reporting lines through the Program.

Objectives

- Link risk and returns – should enhance the Project's capacity to anticipate events, assess risks and set risk tolerances consistent with achieving objectives;
- Rationalize resources – more effectively deploy resources by identifying key drivers of Development and Delivery, thereby reducing overall capital requirements and improving capital allocations;
- Exploit opportunities – aid the identification, and ability to take advantage of, positive events quickly and efficiently;
- Reduce surprises and losses – identify potential adverse events, assess risks and establish responses, thereby reducing surprises and related costs, schedule delays or losses;
- Report with greater confidence – internal and external information that is reliable, timely and relevant;
- Satisfy legal and regulatory requirements – ensure compliance with legal and regulatory requirements and identify risks of non-compliance.

Risk Identification

- Identify specific risk events and opportunities
- Outline root causes and effects associated with each risk event
- Associate risks with specific category or sub-category of the Capital Cost Estimating Methodology (TM 1.1.19)

Responsibilities:
- Regional and Systems Risk Manager(s)

Risk Assessment

- Assess potential cost / schedule impacts (s) for each risk
- Assess Probability (P) for each risk
- Specify any sources or assumptions underlying the assessment

Responsibilities:
- Regional and Systems Risk Manager(s)

Risk Analysis

- Aggregate Risk Management to form a risk profile

Risk Management

- Prioritize risks
- Decide mitigation measures (avoid, reduce, transfer, accept or optimize)
- Identify specific mitigation for critical risks
- Identify responsible parties to execute mitigation measures

Responsibilities:
- Regional and Systems Manager(s) in consultation with Regional and Systems Risk Manager(s)
- For Regional teams, the Regional Project Manager will be responsible for assigning personnel to execute mitigation measures

Monitor & Review

- Enact mitigation measures
- Monitor progress of the mitigation measures
- Review effectiveness of the mitigation measures

Responsibilities:
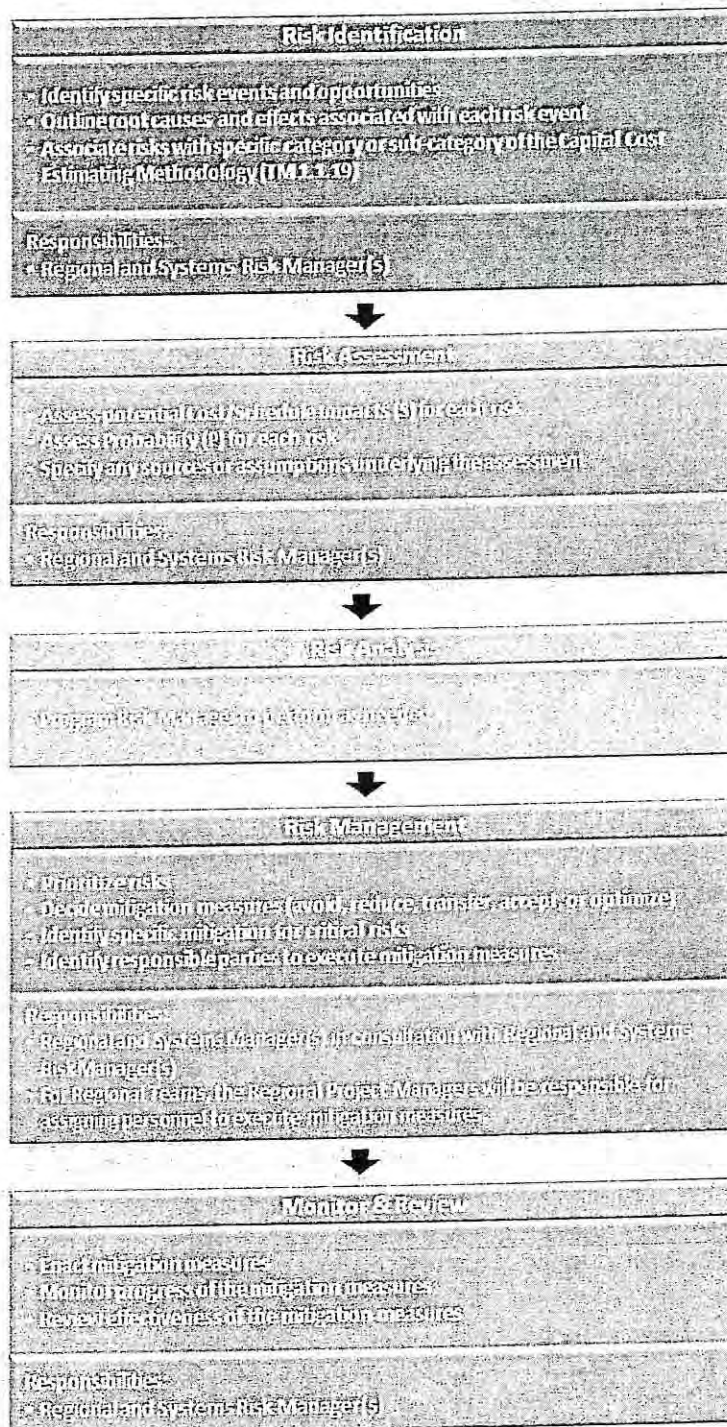- Regional and Systems Risk Manager(s)

Figure 1 Risk register development principles, objectives and process summary

2.0 Personnel Requirements and Primary Risk Management Responsibilities

As a member of their staff reporting directly to the regional project manager, each regional team is expected to have a qualified, experienced risk manager to oversee implementation and execution of the protocols in this document. The principal personnel involved with risk management on CHSTP are given below, together with their primary responsibilities.

PROGRAM MANAGEMENT TEAM

Program Risk Manager: Establish and oversee risk analysis methodologies and procedures; integrate and report on information from Risk Analyst, Regional Risk Managers and other program elements (e.g. Railroad Operations, EMT, Environmental, Staging / Procurement).

Risk Analyst: responsible for integrating information received from regional teams (risk register, cost and schedule estimates) to inform cost and schedule contingencies and ensure consistent application of cost and schedule standards and procedures across regions and sub-systems as they relate to the risk management process

EMT Risk Manager: develop risk registers for Rolling Stock, Train Control, Traction Power/OCS, Communications and Maintenance (these registers are strictly limited to risks with potential cost or schedule impacts – System Safety aspects are a separate effort) and establish appropriate ranges for cost and duration ranges that reflect residual uncertainty, i.e. variability exclusive of individually identified risks.

REGIONAL CONSULTANT TEAMS

Regional Risk Manager(s): develop information required for risk registers, facilitating the identification and assessment of individual risks together with appropriate mitigations following policies and procedures; one/region, eight total

3.0 Risk Register Development Process

While there will be a number of other potential impact areas specified for assessment (e.g. environmental, construction safety, legal/community relations), these can, and generally will, be translated and specified in terms of potential cost and/or schedule impacts to the project. For this reason and for purposes of brevity, the discussion that follows will only reference cost and schedule as potential impact areas. This should not be understood to mean that project considerations with regards to risk will be limited solely to these impact areas.

Assessments of cost and schedule risks will ultimately be specified in quantitative or semi-quantitative (numeric ranges) terms. In addition to allowing objective comparisons of risk exposure across regions and systems that qualitative specifications such as 'high' or 'low' do not, quantitative specifications allow tools such as Monte Carlo methods to be employed for schedule and cost risk analysis. Specifically, it allows objective comparisons between individual risks for prioritization, development of a risk exposure profiles and direct comparison of this risk exposure to available contingency.

When system safety risks have potential cost or schedule implications the *mitigations* to such system safety risks (or hazards), where not accounted for in the base estimate, will be carried as risks on the appropriate risk registers until a decision is made by system safety personnel if or what mitigations will require changes to the design on which the current estimate and schedule is based. At such time, the delivery risk engendered by the possible mitigation to the system safety risk will transition from the risk registers to the cost and/or schedule estimate. More discussion is included on this situation in the following sections.

Risk register development proceeds through the following stages, with the Identification, Assessment and Management elements forming the core of the Risk Register:

- Project Definition
- **Identification**
- **Assessment**
- Analysis
- **Management**
- Monitor and Review

As the project moves forward, risks are periodically revisited and reassessed to reflect the current status of the program. Regional teams are expected to maintain their risk registers and these registers should reflect the current status of the Team's risk management efforts.

3.1   RISK MANAGEMENT PRINCIPLES

As stated earlier, the risk management process as a whole helps us understand and manage the relationships between the business environment, our strategic objectives, the risk to achieving these objectives, and our actual performance. It is founded on the following general principles:

1. *Ownership* - each group, function, and/or team will comply with and embed Project requirements, process and procedures for risk management and individual *risks will be held by specific, named, individuals at the lowest organizational level for which management is feasible.*

2. *Business alignment* – all key decisions are to be supported by an explicit consideration of risk with balanced consideration of safety, regulatory and commercial factors.

3. *Action oriented* – risks and opportunities must be linked to response plans with timely tracking of actions.

4. *Review* – risk management processes will be adequately documented and included in the management system.

5. *Reporting* – reporting on risk and the effectiveness of associated key controls and risk responses is an integral part of management information, following normal reporting lines through the Program.

Identifying and regularly re-evaluating the risks facing the project, prioritizing these risks, and implementing appropriate actions requires a clear focus on actions with a close link to planning and performance management.   Included is the careful balancing of economic and safety factors. Generally speaking, an effective Risk Management effort should be able to provide answers to the following questions:

*   Are our **objectives** at risk?

*   What are the **major risks** facing the Project?

*   What is our current and future **risk profile**?

*   How well are risks **controlled**?

*   Are implemented **controls working** as they should?

*   Are **corrective measures** implemented as planned?

It is neither feasible nor desirable that Risk Management be the sole responsibility of a single individual or isolated group within the project team. In addition to active participation during the identification, assessment and management stages, each Regional Risk Manager, in conjunction with the Regional Project Manager and Regional Manager, is expected to:

1. Comply with the risk management principles outlined in above.

2. Adopt, or ensure compliance with, the roles and responsibilities specified in this document, as appropriate

3. Specifically report on key risks, risk management efforts and status of all identified risks via a current risk register on a monthly basis, in the prescribed way, using standard terminology and measures

These principles, roles and responsibilities ultimately serve to accomplish the following objectives:

- Link risk and returns – fundamentally, Risk Management should enhance the Project's capacity to anticipate events, assess risks and set risk tolerances consistent with achieving objectives;

- Rationalize resources - Allowing the project to more effectively deploy resources by identifying key drivers of Development and Delivery, thereby reducing overall capital requirements and improving capital allocations;

- Exploit opportunities – aid the identification, and ability to take advantage of, positive events quickly and efficiently;

- Reduce surprises and losses – identify potential adverse events, assess risks and establish responses, thereby reducing surprises and related costs, schedule delays or losses;

- Report with greater confidence - Preparing internal and external information that is reliable, timely and relevant; and

- Satisfy legal and regulatory requirements - Supporting efforts to ensure compliance with legal and regulatory requirements and identify risks of non-compliance.

3.2   DEVELOPMENT PROCESS

Project participants will work on different and/or multiple high-speed train corridors and will be working at varying stages of project development concurrently. Recognizing that the risk management activities require involvement of multiple project participants having different roles and responsibilities on the project, the table below provides a summary view on how risk management responsibilities for the development of the risk register are going to be shared.

Error! Reference source not found. identifies the areas of responsibility for the California High-Speed Rail Authority (Authority), Program Risk Management Team (PRM) and Regional Consultants (RC) at each major step in the Delivery Risk Management processes. These responsibilities are described as Approve (A), Review (R) and Perform (P).

Risk Management Stage		Authority	PRM	RC
1	Identify Risk(s)/Opportunities and keyed to Cost Estimating Methodology	-	R	P
2	Assessment: Potential impacts, probability and statement of assumptions, supporting doc.	-	R	P
3	Analysis	-	P	R
4	Management: identify potential mitigations, assign responsibility for carrying out these mitigations	A	R	P
5	Monitor and Review	-	R	P

Note: A = Approve, R = Review, P = Perform

Figure 2 summarizes the process with areas of risk register development that are primarily the responsibility of the Regional Risk Manager and their team in orange.
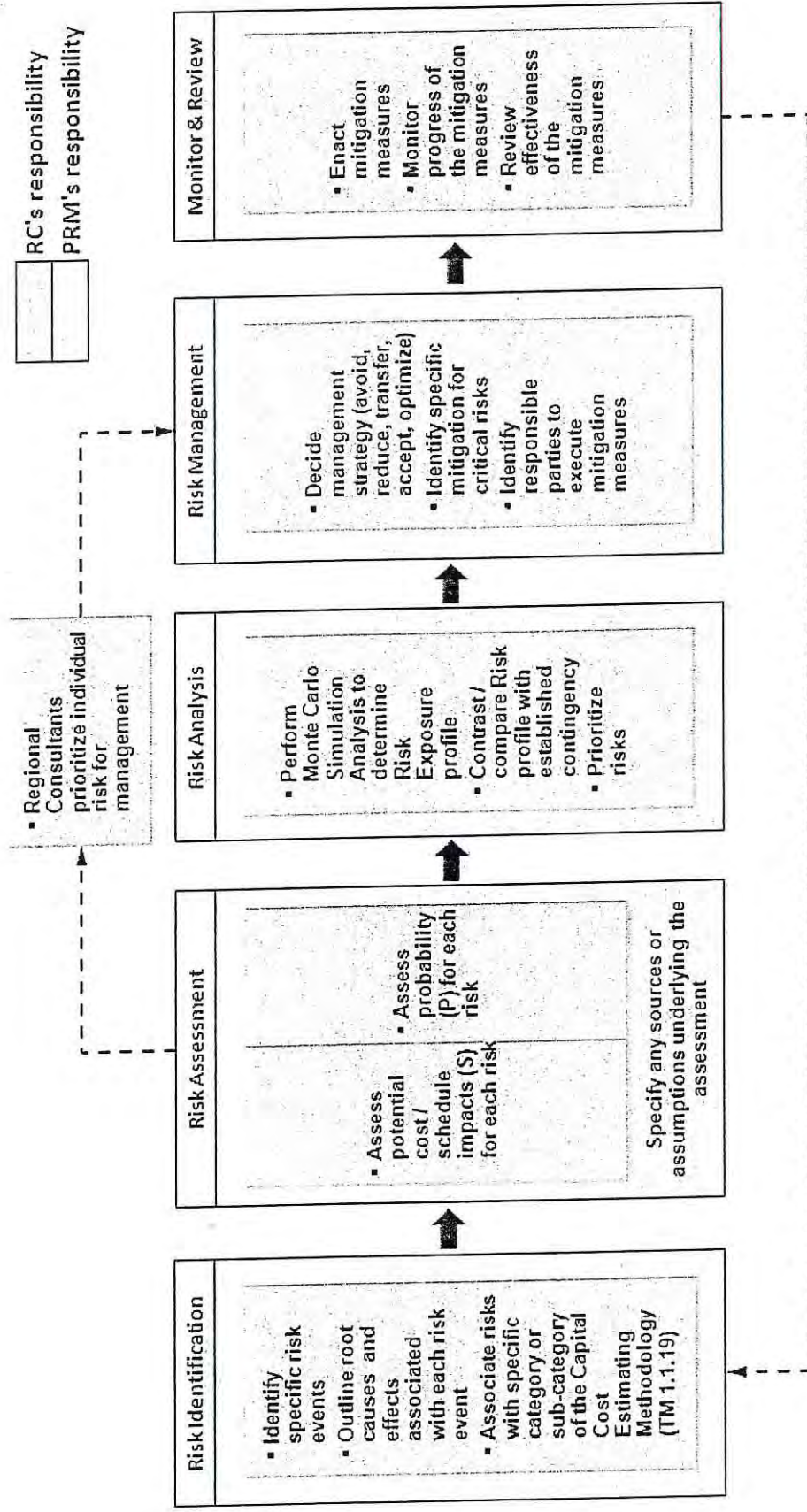
RC's responsibility

PRM's responsibility

Risk Identification

- Identify specific risk events
- Outline root causes and effects associated with each risk event
- Associate risks with specific category or sub-category of the Capital Cost Estimating Methodology (TM 1.1.19)

Risk Assessment

- Assess potential cost / schedule impacts (S) for each risk
- Assess probability (P) for each risk

Specify any sources or assumptions underlying the assessment

- Regional Consultants prioritize individual risk for management

Risk Analysis

- Perform Monte Carlo Simulation Analysis to determine Risk Exposure profile
- Contrast / compare Risk profile with established contingency
- Prioritize risks

Risk Management

- Decide management strategy (avoid, reduce, transfer, accept, optimize)
- Identify specific mitigation for critical risks
- Identify responsible parties to execute mitigation measures

Monitor & Review

- Enact mitigation measures
- Monitor progress of the mitigation measures
- Review effectiveness of the mitigation measures

Figure 2 Delivery Risk Management process flowchart showing the five main stages of risk management

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3.2.1 IDENTIFICATION

Proper risk identification considers the program's objectives and identifies events or situations that might act against these objectives (risks) or advance these objectives (opportunities). It consists of four elements:

- Description of the risk/opportunity
- Associated cost and/or schedule elements
- Specification of the Cause/Effect relationship

Descriptions and cause/effect relationships will be refined over time. Initially, it will suffice if it is clear what the assumption is to participants and can be generally understood by outside reviewers.

There are two primary goals for this stage:

1. Development of a comprehensive list of assumptions underlying the cost and schedule estimates
2. Inclusion of enough description in the form of the description itself and the cause/effect relationship that the team will be able to move forward with the assessment stage

Specifying a cause/effect relationship serves three purposes:

1. Establishes a clear understanding and definition of the issue under consideration that general risk/opportunity statements do not
2. On the cause side, suggests possible mitigation measures once the management stage is reached
3. On the effect side, serves to tie the identified risk or opportunity to the project's objectives, presaging the impact assessment

Given the risk register development process's reliance on the expertise and judgment of the contributors, it is critical that Risk Managers involve (and motivate) the right people. It is recommended that individuals with the following areas of expertise be involved with the initial risk identification, assessment and management workshop and as required for follow on risk management efforts by the Regional Risk Manager:

- Implementation Planning
- Environmental Planning
- Funding/Approvals
- Project Management
- Engineering Design
- Architectural Design
- Cost Estimating
- Scheduling
- Budgeting/Controls
- Real Estate
- Constructability/Contractor
- Operations

- Other Technical (e.g. Legal, Permitting, Procurement)

- Risk Facilitation

The above are general recommendations – the particulars of a region may not require all areas indicated or may require other, additional areas of expertise. Regional Risk Managers will, however, be expected to submit a record of personnel together with their area of expertise that indicates appropriate personnel with requisite experience were involved in risk identification, assessment and primary mitigation activities. It is understood that the Risk Manager alone will not have the expertise to identify and assess the risks for a program of this size or complexity. Selecting and motivating the right people, especially in the context of risk workshops, will be one of their primary duties.

The PMT will provide personnel to facilitate the initial risk workshop in each region to establish a consistent basis for future efforts by the Regional Risk Managers.

INTEGRATING RISK MANAGEMENT WITH COST AND SCHEDULE ESTIMATING

Risk identification should be done in conjunction with the development and review of cost and schedule estimates. The first stage of identifying risks should be a clear delineation of all assumptions (both positive and negative) that underlie the current estimates and schedules.

Risk Managers will 'walk' the cost estimate with the project team, noting any assumptions. The same should be done with the schedule with respect to overall structure of the schedule and the individual activity durations. The project team should identify and note these assumptions, determine the validity of these assumptions and, ultimately, how likely they are to remain valid as the project progresses. Making these assumptions explicit should be the first step in the development of the risk register.

The easiest and *most effective* way to accomplish the above is to make the cataloguing of assumptions part of the development process for the cost and schedule estimates, beginning with the 15% design level. Regional Risk Managers should also review hazards identified as part of System Safety efforts with the project team. In particular, any proposed mitigations to these hazards with cost or schedule implications should be checked against the cost and schedule estimate to see if they have been accounted for. If not, the *mitigation* needs to be included in the risk register as a potential change to the cost/schedule. For such risks, the potential impact is the estimated cost of the mitigation and the likelihood is the probability that this mitigation will be enacted. For these risks, Risk Managers will work with their teams to develop likely cost/schedule impacts with System Safety personnel providing guidance for the probability assessment. This issue will be discussed further in the following sections.

Regional Risk Managers are expected to be fully aware of all assumptions embedded in the cost and schedule estimates and what they indicate with regards to what is, and more importantly, what is not, represented by the cost and schedule estimates.

Once the above basis has been established, Regional Risk Managers can move to more 'free-form' identification with a review of hazard checklists (one example is provided in Appendix C – General Hazard Checklist), plans and profiles and historic problem areas on other similar projects (as given in the RMP, including reference works cited there).

When these reviews point up risks not associated with the previously identified assumptions, RCS Risk Managers should work with the project team to develop descriptions and cause/effect relationship and associate the risk with the appropriate cost or schedule element.

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3.2.2 ASSESSMENT

Based on the risk and its potential impact on the project's objectives, each risk will be assessed for potential impact and probability in semi-quantitative (numeric ranges) or quantitative (specific dollar amount or duration) terms. A risk assessment scoring guide showing the quantitative likelihood and impact ranges is provided in the Appendix B – Risk Scoring Guide, and should be used when assessing both the impact and probability of risks. Any support for this assessment (e.g. contract terms, relevant past projects, formulas) should be recorded at the time the assessment is made. As with the rest of the stages, assessments will be periodically revisited and refined.

Impacts should be assessed in terms of identified project objectives and a single risk may have numerous potential impacts. While there are a number of other potential impact areas specified for assessment (e.g. environmental, construction safety, legal/community relations), these can, and generally will, be translated and specified in terms of potential cost and/or schedule impacts to the project. This should not be understood to mean that project is only concerned with risks that explicitly impact cost or schedule.

The goal for assessment is two-fold:

1. Develop broadly accurate (as opposed to precise) estimates of potential impact and probability
2. Ensure *relative* accuracy with a consistent approach

With regards to the second point, an inconsistent approach that inaccurately elevates the importance of some risks and lowers others will distort management priorities and hamper risk management efforts..

The assessment has two broad deliverables:

1. The assessment itself
2. Assumptions or supporting information underlying these assessments.

The assessment is composed of two parts:

1. Potential impact of the risk (quantified as cost or duration ranges)
2. Probability that the event or situation will occur.

Risk Managers should make a clear delineation between impact assessment and probability assessment and proceed in the order indicated above. If these two steps are not clearly separated, especially in a workshop format, there is a tendency for participants to conflate the two. For example, risks that the assessors feel are low probability may end up with lower impact assessments than would otherwise be justified. As the assessment motivates the prioritization for management, risks that in actuality have the potential for high or even catastrophic impacts on budget or schedule may not receive the management attention that they should. Risk Managers should explicitly ask participants

'Assume the risk event or situation happens, what would the impact be?'

Only once some consensus (in the case of a group) impact assessment has been established should the Risk Manager begin considering the probability assessment. Once the probability assessment is made, the risk is considered fully 'quantified' and the risk exposure for the project due to the individual risk is given by

Risk Exposure = Impact X Probability

An even more common problem than the conflation of probability and impact is the tendency of participants to confuse the manageability of a risk with the risk exposure it represents. Significant problems arise from mixing assessment and management discussions in the context of Risk Management. Potentially severe risks for which participants can think of a number of solutions are inevitably downgraded during assessment; otherwise minor risks for which none of the participants can readily think of solutions end up with higher exposure values than are otherwise justified.

Risk Managers must draw a bright line between assessment and management discussions on the first identification, assessment, (prioritization), and management cycle. It is likely that they will have to actively delay management discussions until the assessment is complete. They should also alert participants to the problem so that they can defend against this bias in their assessments.

RISK SCORING

As indicated below, the risk assessment scoring employs relatively broad ranges for both potential impact and probability.

	1	2	3	4	5
Likelihood	Very Unlikely (1 - 10%)	Unlikely (11 – 35%)	50/50 chance (36 – 64%)	Likely (65 – 89%)	Highly Likely/ Near certainty (90 - 99%)
Cost Impact ($)	Tens of Thousands ($10,000 to $100,000)	Hundreds of Thousands ($100,000 to $1 Mil)	Millions ($1 to $10 Mil)	Tens of Millions ($10 to $100 Mil)	Hundreds of Millions (>$100 Mil)
Schedule Impact (workdays)	Days	Weeks	1-3 Months	3-12 Months	Year or longer

Where more specificity is justified, either on the initial assessment or subsequent reviews, the assessment team can supply their own, narrower range. Additionally, if a particular value between the lower and upper bounds of the assessment judged more likely than others it can be designated as 'Most Likely'.

Narrower probability ranges than those above can also be used. Given the nature of delivery risks, however, it is generally less likely that narrower ranges are justified.

When assessing a risk that may impact multiple points or segments, the description and cause/effect relationship can help determine whether it is more appropriate to break the risk up into multiple instances, each affecting a specific point or segment (such may be the case with ROW risks where there are issues specific to a particular parcel) or keep it as a single risk with an impact assessment that represents the total potential cost of the risk. In either case, the decision can be reviewed once specific mitigations are identified. If the same mitigation action is likely to affect the risk for all the individual instances equally, consider treating it as a single large risk. If different mitigations will need to be applied at different points on the alignment, it is recommended that the risk be broken up into individual instances.

An exception to the relatively wide probability ranges given above commonly occurs as the project progresses: the case when the underlying risk event or situation has occurred but the cost/schedule impact on the project is still uncertain. The example mentioned earlier – when the delivery risk is mitigation to a hazard identified as part of System Safety efforts – is a common case. Once (if) it is determined that the mitigation will be incorporated into the design, the probability is designated as 100% with the risk stemming from the uncertainty surrounding how this change will impact the project. As the design for this element develops, the impact range can be progressively narrowed until it reaches a stage where it is appropriate to transition it out of the risk register and incorporate it into the base cost or schedule.

Example:

Description: In response to system safety efforts regarding intrusion protection, there is the potential that barrier walls will be required at locations x, y, and z (more locations possible). These barrier walls are not part of the current design or cost estimate.

Cause/Effect: mitigation to intrusion hazard requires barrier walls / barrier walls of length *l* (each) added at locations x, y, z

Assessment: $10's of Millions, likelihood: likely (65 – 90%)

If the barrier wall was subsequently required, the probability would be changed to 100% and the impact narrowed as locations were solidified and wall designs developed in anticipation of this risk's removal from the register and incorporation in the cost and schedule estimates as an additional element.

3.2.3 ANALYSIS

For Regional Risk Managers and their project teams, the Analysis stage will consist of the prioritization of risks in anticipation of the Management stage of the process, as indicated in Figure 2. This will be relatively straight forward for cost risks, as the risks can, preliminarily, be ranked by mean exposure. For schedule risks the situation may be more complex as the potential exposure is not only due to the absolute value of its assessment, but also where it falls in the schedule. Specifically, how much float the associated activity has in relation to the duration of the potential delay. The Program Risk Manager will employ Monte Carlo Simulations for analysis in such situations as and when it is needed in support of Regional Teams' efforts.

The prioritization of risks that result from this analysis is intended to inform, not define, the prioritization developed by the regional teams in consultation with the PRM and Authority. It is not the exclusive means by which this prioritization is determined. In practice, this analysis will take place concurrently with the Regional Team's efforts and, generally speaking, the Regional Team's risk management efforts will move from Assessment to Management in accordance with their own preliminary prioritization of individual risks. Prioritization is discussed further in the following section.

3.2.4 MANAGEMENT

The discussion in this section refers specifically to activities and deliverables of the management stage of the Risk Management Process as given in Figure 2, not general risk management processes and deliverables discussed earlier.

Management stage tasks:

1. Determine what management strategy is appropriate for the given risk:
   - Avoid (eliminate the probability of occurrence with, e.g. design changes),
   - Reduce (limit the potential impact and/or probability),
   - Transfer (to a third-party),
   - Accept, *or*
   - Optimize (in the case of opportunities);

   NOTE: any decision to 'accept' a risk, i.e. not develop mitigations for, or actively manage, the risk, must be made in consultation with the PMT

2. Identify actions (if any) that can be taken by the *Regional Team members* to reduce or eliminate the potential impacts, likelihood of occurrence or both

3. Specify a 'due-date' for all actions identified in (2.)

4. Inform the regional Project Manager and Program Risk Manager of any risks for which management responsibility is more properly the responsibility of the PMT or Authority; specifically, when the proposed mitigation(s) require action by persons outside the immediate regional or system team.

5. Identify individual team members that will take responsibility for carrying out any identified risk mitigations – with reference to the above strategies, if risk/opportunity is to be:
   a. Avoided, reduced or optimized a specific team member with the ability, both in terms of expertise and authority, to effectively manage the risk (or capture the opportunity) within the project team must be named as the responsible party;
   b. Transferred, this party must be named;
   c. Accepted, the Regional Project Manager assumes responsibility for monitoring this risk and periodically reassessing the advisability of this management strategy

While the previous risk register development work in identification and assessment can be largely driven by the Regional Risk Managers, management decisions made during this stage are largely made by Regional Managers and Regional Project Managers as prioritization, choice of management strategy, and action assignments involve core management responsibilities. The principal duties for Regional Risk Managers during this stage are:

- Assist Regional and Project Managers in development of mitigations, and more generally by facilitating the above tasks

- Oversee progress on action items, ensuring action items are completed on time and acting as a resource for the rest of the project team

The risk register should stand as a concise action plan. As such, it should provide the what, who and when of the project's risk response and should provide answers to the following:

- ➢ What are we going to do to limit the project's risk exposure due to the identified risks?

- ➢ Who is going to do it?

- ➢ When is it going to be done?

In determining the management prioritization, Regional and Regional Consultant Managers should consider the following:

- 'Manageability' – Have mitigations to the risk been identified? How effective are these mitigations likely to be?

- Cost/Benefit – How much will the proposed mitigations cost and how does this cost compare with the potential cost of the risk event/situation should it occur?

- Intangibles – how might the risk event/situation affect the project (or program as a whole) if it occurred in ways less tangible than additional cost or delay (e.g. reputation or community relations)?

- Worst-Case Scenario (upper bound considerations) – certain risks, due to low probability and/or low ML and lower bound assessments, may have relatively low mean values despite a potentially catastrophic impact should the risk occur (as indicated by the upper bound of the impact assessment); these types of risks may warrant more management attention and resources than other risks with similar or even slightly higher mean risk exposure values.

In conjunction with this prioritization or following it, Regional and Regional Project Managers can determine an appropriate strategy. Decisions regarding what constitutes 'appropriate' may be informed by subsequent development of mitigations.

Per task 4, above, responsibility for the management of individual risks will be assigned to individuals in the best position to manage the risk; once the project team has decided that a particular risk should be actively managed and a general management approach is determined (limiting the probability of occurrence, the severity of the impact, or both):

1. An individual with necessary expertise and authority will be assigned management responsibility for the particular risk;

2. Individual action items will be determined and assigned depending on the size and complexity of the risk. These actions may be assigned to the same person who has overall management responsibility or, for larger issues, may take the form of an ad-hoc team of individuals in the best position to carry out mitigating actions; tasks should be well-defined, assigned to named individuals and have a due date.

All risks must either be assigned to a specific individual on regional team for management or, if no one on the regional team is in a position to properly manage the risk, brought to the attention of the Program Risk Manager for assignment.

3.2.5 MONITOR AND REVIEW

The process as outlined in the previous steps is intended to be continuous and ongoing for the life of the project. Regional Managers, Regional Consultant Project Managers and Risk Managers are expected to regularly monitor and review their risk management efforts to ensure compliance and maintain current records of their risk management efforts. In particular:

- Individual Risks (and opportunities) should be regularly reviewed to ensure that they accurately describe a current threat to project objectives, that their assessments reflect the best estimate of potential impacts and probability and that management strategy and mitigations are well-founded

- Individual team members with management responsibility for one or more risks should monitor and be able to report on the above for their particular risks to their Regional Risk Manager

- The Regional Manager, Regional Consultant Project Manager and Risk Manager should be able to identify and report on the key risks facing them at the current time

- The status of individual mitigations should be regularly updated to reflect the current status of these efforts and team member responsibilities

It is suggested that these reviews and updates of the register itself proceed on an incremental (continuous) basis with individual team members or functional groups – groups larger than five or six are not conducive to detailing individual risks, nor is it generally a productive use of most participants' time. Additionally, scheduling all the individual team members who may contribute to any single part of the process at one time generally precludes regular reviews and leads to start-stop-start-stop risk management efforts and meetings largely given over to recalling what was discussed and decided at the previous meeting.

It is the responsibility of the Regional Risk Manager to motivate and schedule these small-scale reviews and update sessions with the individual or functional groups. It is the responsibility of individual team members or group leads to alert the Regional Risk Manager of any changes in previously identified risks, or new risks that have been identified in the course of their work, in a timely manner.

The entire team should review the current status as a group as the Regional Project Manager sees fit, though it is suggested that these meetings do not take place less often than once a month. These larger sessions are not intended for identification or reassessment of individual risks but instead as updates for the team as a whole on the big challenges facing the project, what is being done about them (or, in the absence of identified mitigations, discussion about what can be done) and general discussion about any issues on the horizon. The Regional Risk Manager can follow-up with individuals or smaller groups after the meeting to further develop and refine any issues raised at the general review meeting.

3.3 DOCUMENTATION AND REPORTING

Effective risk reporting allows management to quickly grasp the key concerns and recent changes, identify who has prime responsibilities for actions as well as the status of priority actions. The information provided needs to address the following questions:

- *"What are our key risks/showstoppers and what is being done to manage them?"*

- *"Which key risks have ineffective responses or outstanding improvement actions?"*

- *"What has changed since the last period?"*

- *"What could prevent us delivering on the strategic program objectives and what is being done to mitigate these issues?"*

- *"What is the reason for current performance gaps and do the risks and opportunities identified previously explain this? If not, what must be done to improve our risk and opportunity management and our forecasting?"*

Regional teams will answer these questions with respect to both their own specific objectives and the larger program objectives and be diligent about alerting other organizational elements about any potential issue that may impact these other elements or the objectives of the program as a whole.

In addition to the risk register itself and information sufficient to answer the above questions, Regional Risk Managers should maintain the following current records/logs:

- A complete record of any information used as a basis for conclusions contained in the report, either as reference or full item

- Explicit record of assumptions underlying all significant risks/hazards contained in the risk register with respect to the identification, impact assessment or management

- Meeting log identifying subject matter, location, duration, date, participants and experience

The Program Risk Manager will develop a common report format in consultation with Regional Risk Managers to facilitate the above and ensure consistency across regions and systems. This report template will be provided to Regional Risk Managers in advance of their first report.

APPENDIX A – RISK REGISTER TEMPLATE

Risk Events Worksheet

IDENTIFICATION					ASSESSMENT			MANAGEMENT		
Include enough detail for other team members to be able to form their own assessment of this risk and its significance to the project								Actions that may be taken by the individual project team to influence the probability (maximizing or minimizing) and/or impacts (maximizing or minimizing)		
Risk I.D. Number [FTA Code - Risk #] e.g. 10.04 - 02 for the second risk identified in FTA cost code 10.04	Short Title	Cause	Most Likely Effect on project objectives	Categorization by Mitigation Timing 1. Requirements Risk [R] 2. Design Risk [D] 3. Market Risk [M] 4. Construction Risk [C] a. Early Construction Risk [C-E] b. Mid-Range Construction Risk [C-M] c. Start-Up / Substantial Completion Risk [C-L]	Cost Impact/Severity Estimated Range ($) Assume the event happens, what is the Most Likely impact? 1. 10's of Thousands ($10,000 to $100,000) 2. 100's of Thousands ($100,000 to $1 Mil) 3. Millions ($1 to $10 Mil) 4. 10's of Millions ($10 to $100 Mil) 5. Hundreds of Millions (>$100 Mil)	Schedule Impact/Severity Estimated Range (workdays) Assume the event happens, what is the potential impact? 1. Days 2. Weeks 3. 1 – 3 Months 4. 3 – 12 Months 5. Year or longer	Probability 1. Very Unlikely (1 - 10% Probability) 2.Unlikely (11 - 35%) 3. 50/50 chance of occurring (36 - 64%) 4. Likely (65 - 89%) 5. Highly likely/Near certainty (90 - 99%)	Management Strategy 1. Avoid 2. Mitigate 3. Transfer 4. Accept 5. Optimize (Opportunities)	Mitigations Including due date for action assignments	Responsible Party (if Mgmt. Strategy is (1), (2), (3) or (5)
Region, Sub-system or Prgammatic(P) If Regional issue, CHSTP Milepost reference if appropriate								Comments/ Assumptions / References underlying assessment		

APPENDIX B – RISK SCORING GUIDE

QUANTITATIVE RANKING

	1	2	3	4	5
Likelihood	Very Unlikely (1 - 10%)	Unlikely (11 – 35%)	50/50 chance (36 – 64%)	Likely (65 – 89%)	Highly Likely/ Near certainty (90 - 99%)
Cost Impact ($)	Tens of Thousands ($10,000 to $100,000)	Hundreds of Thousands ($100,000 to $1 Mil)	Millions ($1 to $10 Mil)	Tens of Millions ($10 to $100 Mil)	Hundreds of Millions (>$100 Mil)
Schedule Impact (workdays)	Days	Weeks	1-3 Months	3-12 Months	Year or longer

RISK MATRIX

Exposure Band

HIGH

MEDIUM

LOW
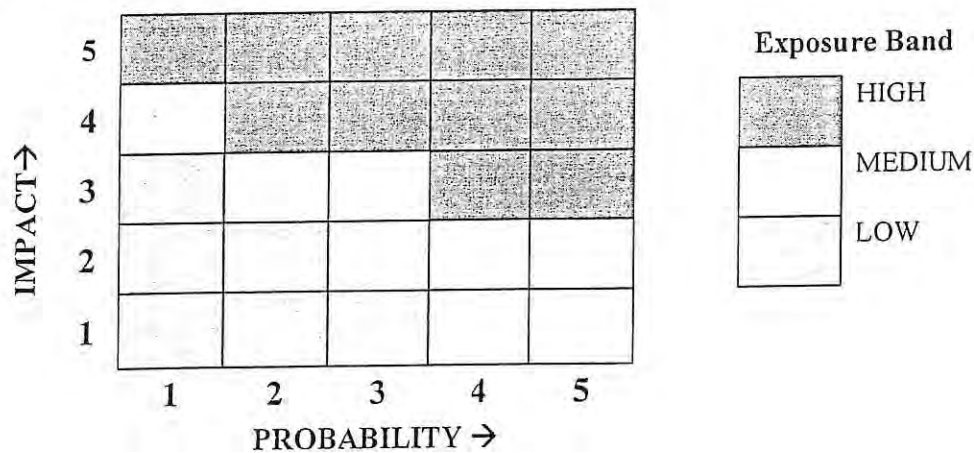
APPENDIX C – GENERAL HAZARD CHECKLIST

Part A: Project Related

Engineering

- ☐ Current design status / significant design development in detail design phase
- ☐ Complexity, constructability of design for both aerial and underground elements
- ☐ Increase in performance requirements/standards between now and final design
- ☐ Final design criteria more detailed than currently assumed
- ☐ Increased complexity (Civil and Systems Design)
- ☐ Increase in amount of underground construction
- ☐ Inadequate geotechnical information
- ☐ Insufficient research on existing facilities
- ☐ No precondition surveys of existing buildings/structures
- ☐ Requirements for new technology

Environmental

- ☐ NIMBY forces realignments
- ☐ Noise (Construction and Operations)
- ☐ Construction induced dust, vibration, settlement
- ☐ Ground Contamination
- ☐ Restrictions in hours of construction
- ☐ Holiday Moratoriums on construction work
- ☐ Disruption of Services
- ☐ Vehicle / Pedestrian conflict
- ☐ Major road and traffic diversions
- ☐ Access needs for Emergency Services

Third Party Impacts

- ☐ Potential impacts to public/private property
- ☐ Impacts to utilities
- ☐ Impacts to public transportation
- ☐ Loss of local business (Retail, Restaurants, Hotels)
- ☐ Potential for adjacent building damage
- ☐ Property taking and easements are underestimated

Logistics and Schedule Impacts

- ☐ Contract packaging and procurement – number of contracts
- ☐ Advance Utility relocations
- ☐ Contractor interference between adjacent segments
- ☐ Production rates slower than assumed

Systems – Procurement, Installation, Operations and Maintenance

- ☐ Procurement of new / additional rolling stock
- ☐ Communications
- ☐ OCS and Signaling
- ☐ Special Trackwork
- ☐ Traction Power / substations
- ☐ Station facilities

Part B: Programmatic

- [ ] Political advocacy for the project /
- [ ] Public acceptance / Local opposition groups
- [ ] Potential for major change in project alignments
- [ ] "Missing" segments within a corridor

- [ ] New Regulatory Requirements
- [ ] Potential for stoppages by other parties or situations
- [ ] Timeliness of FTA, State, City, and Local Agency permits
- [ ] Discovery of Archeological Sites
- [ ] Identification of Historic Sites

- [ ] Sources/Availability of funding
- [ ] Synchronization of projects and funding
- [ ] Inflation and increase in borrowing rates
- [ ] Major increase in raw material prices
- [ ] Cost Escalation due to delays in starting projects
- [ ] Fluctuations in US$ exchange rates
- [ ] Fluctuations in property values

- [ ] Contracting Climate - Unacceptable bid responses
- [ ] Workload/Capacity of regional contractors / availability of skilled workforce
- [ ] Labor relations / regulations / disputes/ strikes
- [ ] Competing activity on selected sites/availability of access to work when required

CALIFORNIA HIGH-SPEED RAIL AUTHORITY
AUDIT OFFICE CHARTER

General
It is the policy of the California High-Speed Rail Authority (Authority) to provide and support an Audit Office as an independent evaluation and consultation activity to provide executive management with objective evaluations; opinions and recommendations concerning operational and programmatic deficiencies and internal and external risks to the organization; strategies for managing organizational risks; and optimization of the internal control environment.

Purpose
The purpose of this Audit Charter is to provide guidance and assistance to the Authority and the Audit Office in fulfilling its oversight responsibilities for the financial and operational reporting processes within the organization. The charter establishes the responsibility of the Audit Office in the areas of organizational risk management, the Authority's system of internal control, and the process for monitoring compliance with laws and regulations governing the Authority's operations.

Authority
Authority is cited in the following regulations:

- Government Code section 13885 *et sec.*

- California State Administrative Manual, Chapter 20000: Section 30 "Internal Audit Organizations"; Section 40 "Audit Standards"; Section 50 "Internal Control"; and Section 60 "Internal Control Reporting".

- Government Code sections 13400 to 13407 – "Financial Integrity and State Manager's Accountability Act of 1983".

Mission
The mission of the Audit Office is to assist management in accomplishing the Authority's strategic objectives by bringing a value-added, risk-based approach to independently review, test, evaluate and improve the effectiveness and efficiency of administrative functions, computer-based information systems and program processes throughout the Authority.

Authority
The Manager of the Audit Division is authorized to review, identify risks, and make recommendations for risk mitigation in all areas of the Authority's operations, including but not limited to, contracting processes and contract oversight, personnel practices, procurement practices, fiscal programs and practices, accountability for property, physical security and security of data and information.

Access

The Manager of the Audit Office and audit staff shall have full, free and unrestricted access to all of the Authority's functions, records, files, information systems, personnel, contractors, physical properties, rental locations, vendors and any other items and staff relevant to the function, process or organizational unit under review.

Documents and information provided to the Audit Office shall be handled in the same prudent and confidential manner as by those employees normally accountable for them. The Manager of the Audit Office shall ensure that audit staff is instructed in the handling and safeguarding of confidential information and shall be responsible for maintaining such confidentiality.

Objectives and Scope

Auditing Objectives:

The objectives of auditing services are to provide independent assurance that:

- there is an established system of relevant and effective policies and procedures for the performance of duties and functions;

- there is accuracy and reliability in the generation and reporting of data and information from staff to management;

- there is an effective system of authorization and access to Authority data, information and assets and that assets are safeguarded;

- there is an appropriate plan for separation of duties;

- there if effective and efficient operation of administration and program processes; and

- administration and programs are compliant with prescribed laws and management policies.

Scope:

The scope of work of the Audit Office is to determine whether the operational and administrative environment is in conformance with Objective 1.3 of the Authority's 2010 Strategic Plan (Ensure that the Authority has sound internal controls) and is adequate to ensure that:

- programs are operating within the highest fiduciary standards and in accordance with applicable laws and approved policies;

- programs and processes are consistent with governmental best practices;

- legislative and/or regulatory issues are recognized and addressed appropriately;

- the operations and processes are consistent with the strategic plan;

- existing policies and procedures are appropriate and updated;

- risks within and outside of the Authority are appropriately identified and managed;

- financial, managerial, and operating information is accurate, reliable, and timely;

- resources are acquired economically, used efficiently, and adequately protected;

- contractors are meeting the objectives of their contracts, while in conformance with applicable laws, regulations, policies, procedures and best practices;

- coordination of responsibilities and activities of external auditors with those of the internal auditors to avoid duplication of efforts;

- appropriate access for auditors and investigators of the state and federal governments is provided; and

- specific operations, processes or programs are reviewed at the request of the Executive Director.

Independence
The Audit Office reports both functionally and administratively to the Chief Executive Officer and the Chief Deputy Director. The Chief Executive Officer and the Chief Deputy Director are responsible for review and acceptance of draft audit reports, for assignment of draft audit reports to staff for preparation of responses to audit deficiencies, and for implementation of audit recommendations.

Responsibilities and Accountability
It is the responsibility of the Audit Office to conduct reviews of the Authority's program and administrative control systems to determine if the control systems are operating in accordance with management's instructions, policies, and procedures, and in a manner which supports the attainment of strategic goals and objectives. In addition, the Audit Office is responsible for:

- Reporting the results of examinations to management personnel of sufficient authority to ensure that appropriate action is taken with respect to any deficiency noted;

- Assessing management's action plans proposed to correct reported conditions. If an action plan is considered unsatisfactory, it is the responsibility of the Audit Office to conduct further discussions with program and executive management to achieve satisfactory resolution;

- Coordinating external audit activities;

- Participating as an advisor in the planning, design, development, and implementation of major computer-based systems to determine whether adequate controls are incorporated

in the systems; adequate systems development life cycle disciplines are followed throughout the project; and system documentation is complete and accurate;

- Participating in the initial stages of major new non-technology projects so that risks can be appropriately identified and managed and to ensure that internal controls are incorporated in the design phase;

- Submitting annual audit plans to the Chief Executive Officer for review and approval, and reporting regularly on progress against the annual plans;

- Reporting to the Chief Executive Officer as to whether appropriate action has been taken on audit findings; whether audit activities have been directed toward the areas of highest exposures to risk with an emphasis on increasing efficiency, economy, and effectiveness of operations and attainment of program objectives; whether internal and external audits are coordinated so as to avoid duplication; whether audit plans are adequate; and whether there are any restriction to access.

- Reporting to the appropriate state entity audit findings that may be considered material and/or egregious and reporting to the Chief Executive Officer and the appropriate deputy directors to provide an update on corrective actions and to notify them of any uncorrected deficiencies in their respective operational areas.

- The Manager of the Audit Office is responsible for convening quarterly meetings of the Chief Deputy Director, and Deputy Directors whose divisions have any uncorrected findings or conditions included in the audit follow-up to update corrective action status thereby allowing the Chief Executive Officer and Chief Deputy Director to better ensure prompt corrective action by all responsible parties.

Professional Standards
The Audit Division shall adhere to the following professional standards:

- International Professional Practice Framework (IPPF) which states that the Definition of Internal Auditing, the Code of Ethics, and the Standards and Interpretations are mandatory (Section 1010).

- Generally Accepted Government Auditing Standards (GAGAS) from the United States General Accounting Office (GAO), as applicable.

- Other professional standards as recommended or required by the Office of Audits and Evaluations (Department of Finance), the Bureau of State Audits and/or other State control agencies that may be applicable.

In addition to the formal professional audit standards referenced above, staff of the Authority's Audit Office shall adhere to the ethical rules and principles attached as Appendix A to this charter.

Relationship to the Risk Management and Internal Control Programs
The manager of the Audit Office will aid management by evaluating its risk management system during each audit and consulting engagement. The manager will ensure that reports of any existing operational risks and mitigation efforts are made to the executive management of the Authority in conformance with the performance measures and strategies identified in Objective 1.3 of the Authority's 2010 Strategic Plan.

Approval
This Audit Office Charter is transmitted to the Chief Executive Officer on the date signed by the Audit Manager and is effective upon approval by the Chief Executive Officer on the date indicated below.

Transmitted to Chief Executive Officer:

_____   _____
Manager, Audit Office   Date

Approved:

_____   _____
Chief Executive Officer   Date

INTERNAL AUDITING

Definition of Internal Auditing

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

Principles

Internal auditors are expected to apply and uphold the following principles:

1. Integrity

The integrity of internal auditors establishes trust and thus provides the basis for reliance on their judgment.

2. Objectivity

Internal auditors exhibit the highest level of professional objectivity in gathering, evaluating, and communicating information about the activity or process being examined. Internal auditors make a balanced assessment of all the relevant circumstances and are not unduly influenced by their own interests or by others in forming judgments

3. Confidentiality

Internal auditors respect the value and ownership of information they receive and do not disclose information without appropriate authority unless there is a legal or professional obligation to do so.

4. Competency

Internal auditors apply the knowledge, skills, and experience needed in the performance of internal audit services.

Rules of Conduct

1. Integrity

Internal auditors:

    1.1. Shall perform their work with honesty, diligence, and responsibility.

    1.2. Shall observe the law and make disclosures expected by the law and the profession.

    1.3. Shall not knowingly be a party to any illegal activity, or engage in acts that are discreditable to the profession of internal auditing or to the organization.

    1.4. Shall respect and contribute to the legitimate and ethical objectives of the organization.

2. Objectivity

Internal auditors:

2.1. Shall not participate in any activity or relationship that may impair or be presumed to impair their unbiased assessment. This participation includes those activities or relationships that may be in conflict with the interests of the organization.

2.2. Shall not accept anything that may impair or be presumed to impair their professional judgment.

2.3. Shall disclose all material facts known to them that, if not disclosed, may distort the reporting of activities under review.

3. Confidentiality

Internal auditors:

3.1. Shall be prudent in the use and protection of information acquired in the course of their duties.

3.2. Shall not use information for any personal gain or in any manner that would be contrary to the law or detrimental to the legitimate and ethical objectives of the organization.

4. Competency

Internal auditors:

4.1. Shall engage only in those services for which they have the necessary knowledge, skills, and experience.

4.2. Shall perform internal audit services in accordance with the *International Standards for the Professional Practice of Internal Auditing* contained within the International Professional Practice Framework (IPPF).

4.3. Shall continually improve their proficiency and the effectiveness and quality of their services.

Footnote #4

To : Mehdi Morshed, Executive Director
California High-Speed Rail Authority

From : George C. Spanos
Deputy Attorney General
Business and Tax Section
Office of the Attorney General – Sacramento

Subject :

Peer Review Group; Applicability of Open Meeting Act

You have requested informal advice as to whether the peer review group, referenced in Public Utilities Code section 185035 and Streets and Highways Code section 2704.08, is subject to the Open Meeting Act. For the reasons which follow, I have concluded that it is considerably more likely than not that a court would find that the peer review group is not subject to the provisions of the Open Meeting Act.[1]

Please note that the advice contained in this memorandum assumes that the peer review group will function as described in the law, and that it will not take on any additional responsibilities. Any enhancement or alteration of the role of the peer review group would render the advice and conclusions contained herein void.

As discussed below in greater detail, Public Utilities Code section 185035 directs the Authority to "establish" an independent peer review group. The peer review group is to review and to analyze various elements of the Authority's plans, prior to the Authority requesting an appropriation of funds for any particular corridor, and to report to the Legislature on its findings and conclusions. The Authority does not play any role in the selection of the members of the peer review group, nor does it have anything to say as to the areas of experience or expertise of members of the group.

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[1] Please note that this advice is accompanied by the customary disclaimer: this advice, and the conclusions expressed herein, are provided to you in my capacity as legal counsel to the Authority; they do not constitute a formal opinion of the Attorney General nor do they necessarily reflect the Attorney General's views. If a formal opinion is desired, it can be requested from the Attorney General's Opinion Unit. Moreover, any advice contained herein is intended for the Authority's use only, and is not intended to be relied upon by anyone else.

Section 185038 was added to the High Speed Rail Act as a result of Assembly Bill 3034, approved in 2008.[2] The same measure included other provisions which made up the Safe, Reliable High-Speed Passenger Train Bond Act (hereafter, the "Bond Act") presented to and approved by the voters at the November 4, 2008, election. The bill also included other provisions which amended the High-Speed Rail Act.

The Bond Act authorized the issuance of $9 billion of bonds to be used for planning and engineering for the high-speed train system and for capital costs. (Sec. 2704.04, subd. (b)(1).) However, the money does not flow automatically to the Authority. It must be appropriated by the Legislature as part of the annual Budget Act. (Sts & Hwys C. sec. 2704.04, subd. (b).) At least 90 days prior to requesting an appropriation of bond proceeds for use in any particular corridor, the Authority must approve and submit to the Director of Finance, to the peer review group, and to the transportation and fiscal committees of the Legislature a detailed funding plan. (Sts & Hwys C. sec. 2704.08, subd. (c).) The plan is to be evaluated by the peer review group which, within 60 days of receiving the plan, reports on its conclusions to the Legislature. (Pub. Util. C. sec. 185035, subd. (a), (c), and (e).) Thus, a request by the Authority for an appropriation cannot be made until after submittal of the plan and after the peer review group has made its report to the Legislature.

The Authority's plan must include a number of elements. These elements include the cost of construction, the sources of all funds to be invested in the corridor, projected ridership and operating revenue, foreseeable risks associated with construction and operation and management of those risks, and the status of environmental review. (See Sts & Hwys C. sec. 2704.08, subd. (c)(2).)

The Peer Review Group is defined in Public Utilities Code section 185035. It consists of eight members who are to have specified types of experience and expertise and who are designated by specified public officials. The Treasure designates two persons with experience in the construction or operation of high-speed trains in Europe, Asia, or both. The Controller designates one person with experience in engineering and construction of high-speed trains and another person with experience in project finance. The Director of Finance designates a person from a financial services or financial consulting firm. The Secretary of the Business, Transportation, and Housing Agency designates a person with experience in environmental planning and two other persons who are expert representatives from agencies providing intercity or commuter passenger train services in California.

The Peer Review Group's purpose is to review "the planning, engineering, financing, and other elements of the authority's plans and issuing an analysis of appropriateness and accuracy of the authority's assumptions and an analysis of the viability of the authority's financing plan, including the funding plan for each corridor." (Pub. Util. C. sec. 185035.)

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[2] All references to section 185035 are to the Public Utilities Code. All references to section 2704.08 are to the Streets and Highways Code. All references to section 11121 are to the Government Code.

There is a correspondence between the disciplines and areas of experience which certain members of the peer review group are to have and the elements of the Authority's plans which they are to review and to analyze. In other words, the membership of the peer review group appears to have been tailored by the Legislature taking into account the various elements which the law requires be included in the funding plans prepared by the Authority.

The Open Meeting Act defines the term "state body" in Government Code section 11121. There are four definitions in that section. Two of them, set forth in subdivisions (b) and (d), can be dismissed with little discussion.

Subdivision (b) of section 11121 defines "state body" to include a multimember body "that exercises any authority of a state body delegated to it by that state body." The authority, if any, of the peer review group and its responsibilities are set forth in the legislation. The High-Speed Rail Authority does not delegate any authority to the peer review group. Consequently, subdivision (b) does not apply.

Subdivision (d) of section 11121 defines "state body" as a multimember body "on which a member of a body that is a state body pursuant to this section serves in his or her official capacity as a representative of that state body and that is supported, in whole or in part, by funds provided by the state body." As the foregoing indicates, two conditions must both be satisfied. While it is possible that the Authority will provide funds to support the peer review group's activities, the other condition – membership of a member of the High-Speed Rail Authority Board on the peer review group as a representative of the board – does not exist. The Legislature has provided in detail for the membership of the peer review group. It does not include a member of the Authority Board, nor does the Board have any role to play in selecting who shall be a member of the peer review group. Consequently, subdivision (d) does not apply.

The remaining two definitions call for more detailed examination. Subdivision (c) of section 11121 defines "state body" as a "multimember advisory body of a state body, if created by formal action of the state body or of any member of the state body, and if the advisory body so created consists of three or more persons." The peer review group, having eight members, satisfies the numerical requirement of subdivision (c). There remain, then, two questions: (1) is the peer review group "created" by the Authority and (2) is it an advisory body within the meaning of section 11121?

Subdivision (c) uses the verb "created." Section 185035, on the other hand, uses the verb "establish": "The authority shall *establish* an independent peer review group." (Emph. added.) The verbs "to create" and "to establish" are not synonyms. "Create" is defined to mean "[t]o cause to come into existence; bring into being; make; originate." By contrast, "establish" is defined to mean "[t]o to make stable; make firm; settle."[3] Given these differing definitions, and taking into account the fact that the Legislation has prescribed the membership of the peer review group, defined it as being "independent," and provided that the group reports, not to the

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[3] Webster's New World Dictionary, Second College Edition, 1972.

Authority but to the Legislature, one can reasonably conclude that the Authority's role is to assist the peer review group in organizing itself, but not "to create" it.[4]

Putting aside whether "establish," within the meaning of section 185035, is synonymous with "created" within the meaning of Government Code section 11121, there is an independent basis for concluding that subdivision (c) does not apply. In order to be a "state body" under subdivision (c), the multimember body must be an "advisory" body. Presumably, it must advise the body which created it. However, the peer review group does not advise the Authority. The peer review group reports to the Legislature, not to the Authority. Moreover, its function is not to advise, in the typical sense, but rather to report to the Legislature on its review (or on the review made by its members) of various elements of the Authority's funding plans.

Furthermore, subdivision (c) applies only to advisory bodies created by formal action of a state body. As shown above, the peer review group is not created by formal action of the Authority. The group's existence is a product of action by the Legislature. Even if it were deemed the product of formal action by the Authority, it is not an advisory body of the Authority. Thus, subdivision (c) does not apply.

Subdivision (a) of section 11121 defines "state body" to include every "state board, or commission, or similar multimember body of the state that is created by statute or required by law to conduct official meetings and every commission created by executive order." The peer review group is neither a state board nor a commission, it is not required by law to conduct official meetings, and it was not created by executive order. Thus, in order for subdivision (a) to apply the peer review group must be a multimember body of the state which is *similar* to a state board or commission and which is created by statute. Thus, two issues arise in applying subdivision (a) to the peer review group: (1) is it created by statute and (2) is it similar to state boards or commissions?

The peer review group is created either by the Legislature or by the Authority. As discussed above, in connection with subdivision (c) of section 11121, the peer review group does not appear to be a creation of the Authority. However, if it is, then it is not created by statute and therefore subdivision (a) does not apply. If, on the other hand, it is deemed to have been created by statute, then the inquiry must turn to the question of *similarity*.

If the Legislature had intended all multimember bodies created by statute to fall within the definition of subdivision (a), it would not have used the word "similar." It could simply have stated that "state body" includes "any multimember body of the state that is created by statute." However, it did not do so. Instead, by using the words it chose to use, it implicitly

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[4] Note that if the peer review group is "created" by the Authority, then subdivision (a), pertaining to multimember bodies "created" by statute, would not apply. Conversely, if the peer review group is "created" by statute, then subdivision (c) does not apply.

excluded some multimember bodies created by statute from the scope of subdivision (a), to wit: multimember bodies created by statute that are *not similar* to boards and commissions.[5]

The purpose of the Open Meeting Act has been described by the Attorney General as allowing "the public to attend, observe, monitor, and participate as fully as possible in the decision-making process of state bodies." (85 Ops. Cal. Atty. Gen. 145.) However, not all multimember bodies are "decision-making" bodies, nor is it feasible for the public "to attend, observe, monitor, and participate" in the work of any multimember body.

The peer review group is a good example of a body which is not a decision-making body. It is made up of a group of members who represent disparate disciplines. Some are experts in operations or construction of high-speed trains overseas. Others are engineers. Yet others have expertise in environmental or financial matters. As discussed above, the array of disciplines described in section 185035 corresponds to the elements that the law requires be included in the Authority's funding plans for the various corridors of the system.

The intent of the Legislature appears to have been to have each element of the Authority's funding plan reviewed by a person or persons with particular experience applicable to that element. By contrast, a board or commission is made up of voting members each of whom has an equal voice as to any matter that comes before that body for decision or recommendation. While some members of such a board or commission might defer to other members who may be known to have special knowledge about a particular matter, they are not obliged to do so, nor is there any expectation that only the knowledgeable members will participate in the decision on that matter which the board or commission will eventually make as a single entity.

On the other hand, the peer review group is so constituted as to suggest strongly that the reports the group will make to the Legislature will be made up of constituent elements, and that each element will be prepared by and will reflect the analyses and conclusions of those group members with expertise relating to that element. For example, the Legislature probably does not expect that the Director of Finance's designee, from a financial services or financial consulting firm, will be involved in the analysis of those portions of the Authority's plans involving the accuracy of the Authority's certification relative to environmental clearances. (Sec. 2704.08, subd. (c)(2)(K).)

The issue of whether a multimember body was "similar" to a board or commission was addressed in a formal opinion of the Attorney General in 2002. (85 Ops. Cal. Atty. Gen. 145; hereafter, the "AG opinion.") The question pertained to the Clinical Advisory Panel, "established in the department [i.e., Department of Managed Health Care]." (Former Health and Safety Code section 1347.1.)

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[5] Note that the Legislature did not include the word "committee" in subdivision (a), although it did include the word in subdivisions (b), (c), and (d). A committee is often, although not always, a subset of some other body, such as a board, commission, or other legislative body.

The statute specified that the Clinical Advisory Panel would be made up of five appointees of the department director who would be professors of medicine and two of whom would also be practicing physicians. The statute stated that the purpose of the panel was "to provide expert assistance to the director in ensuring that the external independent review system is meeting the quality standards necessary to protect the public's interest." The statute also stated that "[t]he panel shall review the decisions made in external review to ensure that the decisions are consistent with best practices and make recommendations for improvements where necessary. The panel shall meet quarterly and shall have staff provided as necessary."

The AG opinion concluded that the panel met the definition of "state body" set forth in subdivision (a) of section 11121 because it was a multimember body established by legislative command which was required to hold meetings. In reaching its conclusion, the AG opinion rejected the idea that the panel was not "similar" to a "state board or commission." It based its rejection on the fact that there are statutorily created boards and commissions which have only investigatory or advisory roles, such as the Commission on the Status of Women and the Commission on Aging.

The Peer Review Group can be distinguished from the Clinical Advisory Panel discussed in the AG opinion. It is not "similar" to boards and commissions. First, it is not required to hold meetings. This fact is consistent with the diversity of disciplines of its membership and the reasonable inferences one can draw as to how it is expected to function. One must also take into account the fact that the Peer Review Group is directed to render a report to the Legislature and other entities within 60 days of receiving the Authority's funding plan. Meeting that deadline and conducting all of its deliberations within the context of the Open Meeting Act are probably not reconcilable. By contrast, the law requires the Commission on the Status of Women to conduct its meetings publicly, and the Commission on Aging is required to hold meetings at least six time a year. (Gov. C. sec. 8243 and Welfare and Inst. C. sec. 9202, subd. (e).

Second, based on its structure and task, the Peer Review Group is not a body reasonably expected to make collective decisions. The areas of expertise which the members of the group are to have and the correspondence of those areas with the elements of the funding plans which the members of the group will evaluate suggest a process which will not involve the making of decisions through a voting process. By contrast, and almost by definition, "boards," "commissions," and "committees" are generally viewed as bodies which act collectively, based on numerical (i.e., majority or other fractional) voting. (While a "panel" of people is not necessarily a body which acts collectively, in the case of the Clinical Advisory Panel the law required it to meet.) In effect, the Peer Review Group is made up of persons who will function in a sort of staff capacity rather than serving, collectively, in a decision-making role.[6]

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[6] Given the emphasis given to areas of expertise, it is less likely that the Peer Review Group's members will depend on the expertise of others in order to reach their findings and conclusions, but instead will rely on their own areas of expertise, similar to a group of staff members preparing a multi-faceted report.

Third, the nomenclature used by the Legislature underscores the distinction between the Peer Review Group and boards and commissions. The AG opinion used as illustrations of statutorily-created advisory bodies two entities which the Legislature denominated as "commissions." On the other hand, the members of a "group" constitute simply a collection of people. There is nothing associated with the word "group" to suggest collective action as there is in the case of boards, commissions, and, to a lesser extent perhaps, committees. Thus, not only in terms of function but also in terms of nomenclature, it is reasonable to draw the inference that the Legislature did not intend to create a body "similar to a state board or commission" when it created the peer review group.

For the reasons set forth above, the stronger argument regarding the applicability of the Open Meeting Act to the Peer Review Group is that the Act does not apply. However, this conclusion assumes that the Peer Review Group exercises only those powers and duties expressly set forth in the law.

Footnote #5

Curt Pringle, Chairman
Tom Umberg, Vice-Chair
Russell Burns
David Crane
Rod Diridon, Sr.*
Fran Florez*
Richard Katz
Judge Quentin L. Kopp*
Lynn Schenk
*past chair

ARNOLD SCHWARZENEGGER
GOVERNOR

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

June 25, 2010

The Honorable Cathleen Galgiani
California State Assembly
State Capitol
Sacramento, CA 95814

Dear Assembly Member Galgiani:

As the author of 2008's Assembly Bill 3034, which placed on the ballot a bond measure making the development of a high-speed train system in California possible, I write to you seeking assistance in clarifying an element of that law which plays an important role in the development of the project. The question is related to the independent Peer Review Group described in the law.

The Bureau of State Audits recently raised the issue of the Peer Review Group, recommending that the Authority ensure the group meets openly in public in accordance with the state's Open Public Meetings Act. On the other hand, the Authority's chief legal counsel, a Deputy Attorney General within the Office of the Attorney General, has provided informal advice to the Authority that the Peer Review Group was not intended to be subject to the Act.

AB 3034 expressly provides that the Review Group is "independent" and that it reports to the Legislature. It also states that the Peer Review Group is to report to the Legislature within 60 days after it receives the Authority's funding plan for a corridor or usable segment. However, while AB 3034 states that the Authority has a responsibility to submit to the Review Group "any and all information that the peer review group may request," the bill leaves unstated many issues such as who is responsible for convening the group – if they are even intended to convene – who provides legal counsel to the group, who is responsible for their expenses, etc.

Since the Peer Review Group is described as being independent, the Authority is uncertain as to the extent to which it should become involved in how the Peer Review Group performs its role, or even whether the Authority has any control over such things as how the Peer Review Group is to function. The Authority does not want to appear to interfere in the operations of an independent body that reports to the Legislature.

Attached is a copy of the informal advice memorandum, dated May 8, 2009, obtained by the Authority from its legal counsel. It notes, among other things, that the composition of the Peer Review Group, including the varying types of expertise and experience its members are to have suggests that the Peer Review Group is not intended to be a deliberative body operating on
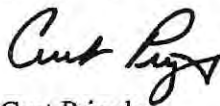
majority vote principles but that it is rather a panel of experts each of whom is expected to contribute an opinion as to those elements of the Authority's funding plans which correspond to his or her area of expertise or experience. The memorandum also questions whether the Peer Review Group could accomplish the task assigned to it within the 60 day period set forth in the law if it were required to conduct all of its work in open session. The Authority itself expresses no opinion on the subject, but provides the memorandum for whatever assistance it may provide to the Legislature and to its counsel.

Although the Bureau of State Audits suggested that the Authority obtain a formal opinion of the Attorney General, formal opinions can be time-consuming and costly exercises. The more direct approach is for the Legislature to clarify the law with respect to the issues noted above through an amendment to the High-Speed Rail Act. Another option is for a member of the Legislature to request an opinion of the Legislative Counsel. Since the Peer Review Group reports to the Legislature, a request for an opinion from the Legislature's own counsel would seem to be appropriate.

Because this issue has become a piece of the discussion within the state budget process, this question is timely. Additionally, the Authority must respond to the State Auditor by June 28 and again by the end of October in regards to its recommendation.

Thank you for your assistance in clearing up this issue and for your unwavering support for high-speed rail in California.

Sincerely,

Curt Pringle
Chairman

Attachment

cc: California High-Speed Rail Authority Board
        Roelof van Ark, CEO

Electronic Document Management Solution
Statement of Work (SOW)
Issued by
California High Speed Rail Authority

1. INTRODUCTION

The California High-Speed Rail Authority (Authority) currently has a small staff of civil service employees who handle the administrative and financial aspects of the department. It is necessary that the Authority contract out Electronic Document Management to a firm that offers Electronic Document Management as an Application Service Provider (ASP) as there is no electronic system currently within the Authority to track, retrieve, backup, save and archive our paper and electronic documents.

2. OBJECTIVE

The objective of this contract is to provide Hosted - (ASP) - Electronic Document Management for the Authority using current and future technology via the internet. Hosted - (ASP) - Electronic Document Management will consist of setting up and maintaining all Electronic Document Management web servers, SQL servers, Document Archiving and access permissions related to the Electronic Document Management system while ensuring that the system is compatible and connects seamlessly to the Authority Contract Expenditures, Budget, Project Tracking and Time Study applications. The system will provide staff with a web portal to upload, tag (Utilizing the Authority numbering identification system) and search for documents within the system. Providing secure access through web portal login.

Services will consist of providing login access to Authority as well as Online Documentation to the Electronic Document Management system .

3. SCOPE OF WORK

The scope of work under this contract includes the following:
   3.1 Modify the current Document tracking system to utilize the tracking codes of the Authority
   3.2 Integrate the Document Tracking system into the Authority Contract/Office Expenditure, Budget, Project Tracking and Time study applications.
   3.3 Provide a Login interface VIA the web to access the Document Management system from any web accessible PC.
   3.4 Provide Access to the Hosted Electronic Document Management system during normal Business hours with a 99% uptime for the year
   3.5 Provide Daily Backups of the Document Management System Data
   3.6 Provide all hosting of the Document Management system Data for the Authority

4. PERSONNEL REQUIREMENTS
The following resources are required on an "as and when requested" basis:
   4.1 Application Support Technician (1)

4.2 Sr. .NET Developer (1)
4.3 Database (SQL) Administrator (1)
4.4 Network Engineer (1)
4.4 Project Manager (1)

5. SERVICES REQUIRED

The resources listed in section 4 above will provide the following services on an "as and when requested" basis:

5.1 Application Support Technician - Will provide answers to application "USER" questions to the Authority staff utilizing telephone, email and remote application/PC support, including login access support; general application utilization questions, compatibility questions regarding local (Authority) software upgrade issues and concerns.. Application support response will be within 2 hours of initial reporting of any questions or issues.

5.2 Sr. .NET Developer and Database (SQL) Administrator- Will receive direction from the contractors Project Manager in relation to updates or changes that are needed to the application. All application changes and additional billing approval for said changes will be approved by the Authority project manager before beginning or implementing any changes.

5.2 Network Engineer- Will ensure that the web server and Database server are properly patched and that compatible updates are installed to ensure that the Document management system us running efficiently. The Network engineer will also ensure that the backups are working properly and assist in any file restores that are necessary.

5.3 Project Manager - Will meet with authority staff to go over the implementation plan. This resource will also ensure that as new application features are required by the Authority they are approved by the Authority project manager and implemented as per the agreed upon time schedule. Through the term of this contract the project manager will ensure that the Authority receives excellent quality of service and will immediately resolve any issues that come up. The Project Manager will be the connection between the Authority and the contractor and will be required to attend meetings as necessary at the Authority office in Sacramento to go over application requirements and project scope.

6. DELIVERABLES

The Contractor shall submit all deliverables specified to the Authority Administration designated staff. Drafts of the deliverables must be forwarded to Authority staff for review and comment as determined in consultation with the Contractor. Deliverables under individual Task Authorizations may include:

6.1 Monthly invoices sent to the Authority by e-mail. Invoices should include all significant activities performed by each occupational category or resource under each task during the period covered by the invoice.

6.2 Application support response time will be within 2 hours of initial reporting of questions or issues.

6.3 Permission Change response time when requested by the Authority will be within 72 hours of the initial request.

6.4 99% uptime of access to the Document Management system during a given year.

6.5 Contractor will attend meetings "as and when decided: to discuss any of the following:
    6.4.1 status of all action/decision items originating from each task, as well as a list of outstanding activities and the expected completion date;
    6.4.2 a description of any issues or problems encountered which are likely to require attention by the Authority;
    6.4.3 recommendations relating to the process of the work, if applicable;

7. FORMAT OF DELIVERABLES

7.1 Application support Technicians providing technical services via phone, email and remote support "as and when requested"

7.2 Monthly invoices must be submitted via email to the Authority each month.

7.3 Written deliverables must be in Adobe PDF.

8. Acceptance Criteria

Invoices must be sent monthly to the Authority after service is provided by the contractor. Hours performed by each occupational category should be listed on invoices under each task. Any technical documents developed for the Authority will be reviewed and approved by designated Authority staff.

9. State Responsibilities

Provide access to business and IT equipment as necessary for the contractor to complete services and support. Authority will ensure high speed Internet connection by all staff that will be accessing the Electronic Document Management system. Authority staff will request application support or software revisions/changes with e-mail requests.

10. LOCATION OF WORK

The majority of the work will be performed at the contractor's facilities. Authority's physical address is 925 L Street, Sacramento. Access to IT systems will be made available as required. The contractor will attend meetings at the Authority's headquarters.

11. Contract Terms

The term of the contract will be from June 1, 2010 through May 31, 2012. The estimated value of the contract is not to exceed $200,000.00 and services will be billed monthly.

Footnote #7

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

May 25, 2010

William M Ashley, P.E.
Sr. Vice President
T.Y.Lin International
3301 C Street, Building 100 M
Sacramento, CA 95816

Subject: Bureau of State Audits Recommendation

Mr. Ashley,

In the recent audit report published by the Bureau of State Audits , the Authority has been advised to amend the Program Management Oversight's (PMO) Annual Work Program (AWP) to include a critical review of the Program Management Team's (PMT) progress report as a specific deliverable.

This critical review should contain the items below but not limited to:
1) Overall program status (budget vs. schedule).
2) Key issues and proposed remedies.
3) Significant accomplishments in the previous period.
4) Progress and cost to date.
5) Worked performed outside the scope of the work program.

Please amend your 2009/2010 AWP to address these issues and continue this trend for all AWPs in the future fiscal years.

I trust that you will take immediate affirmative steps to resolve this issue. I appreciate your full cooperation.

Sincerely,

Shahin Pourvahidi, P.E.
Project Delivery Director

PB 125 YEARS

Parsons
Brinckerhoff

303 Second Street
Suite 700 North
San Francisco, CA 94107-1317
415-243-4600
Fax: 415-243-0113

May 19, 2010

PB-CHSRA-00907

Shahin Pourvahidi, P.E.
Project Delivery Director
California High-Speed Rail Authority
925 L Street, Suite 1425
Sacramento, CA 95814

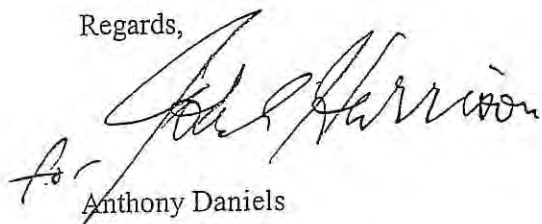Re: Regional Consultant (RC) Invoice Review Process

Shahin,

Attached is a draft invoice review process that is been issued to the Regional Managers and Regional Consultants. Informal reviews of this document have been performed by Authority staff. A formal review from the Authority with comments is requested by June 1, 2010.

Once the Authority's comments are received they will be incorporated and the process will be updated and re-issued.

I would like to point out that since contract inception all Regional Consultant Monthly Progress Reports have been reviewed by the PMT. The Monthly Progress Reports includes a financial snapshot which is summarized and incorporated in the PMT Executive Summary Monthly Progress Report. In essence all work performed and costs incurred have been reviewed by the PMT. The PMT will ensure that a 100% review of all Regional Consultant invoices will be performed in the future.

Regards,

Anthony Daniels

cc: Carrie Pourvahidi
        John Harrison
        Ken Hartley
   All Regional Managers
        All Regional Teams

Attachment: Regional Consultant (RC) Invoice Review Process, May 19, 2010 v1.0

AD-SP-AWP Invoice Review 051910.doc

Regional Consultant (RC) Invoice Review Process

Per Anthony Daniels email directive of December 16, 2008, Regional Managers (RMs) are to review all Regional Consultant invoices against work performed.

1. RC completes Monthly Progress Report (MPR) and Invoice by the 10th of each month. MPR includes the invoice data. (It is recognized that accomplishing this by the 10th may take some time. Please do your best).
2. RC MPR and invoice are posted on ProjectSolve2 and mailed to CAHSRA with MPR.
3. RC notifies PMT RM and PMT Operations that Invoice is ready for review.
4. PMT RM reviews invoice against work performed and posts comments on PS2.
5. The RM notifies CAHSRA, RC and PMT Operations via email that invoice has been reviewed and either approved or not approved for payment (within 2 days).
6. CAHSRA performs check and review of Invoice.
7. CAHSRA forwards approved invoice to DGS for processing or returns to RC for corrections (within 15 days of receipt).
8. Department of General Services (DGS) processes invoice for payment (within 15 days).
9. State Controller's Office (SCO) prepares and mails check to RC (within 15 days).

May 19, 2010 v1.0
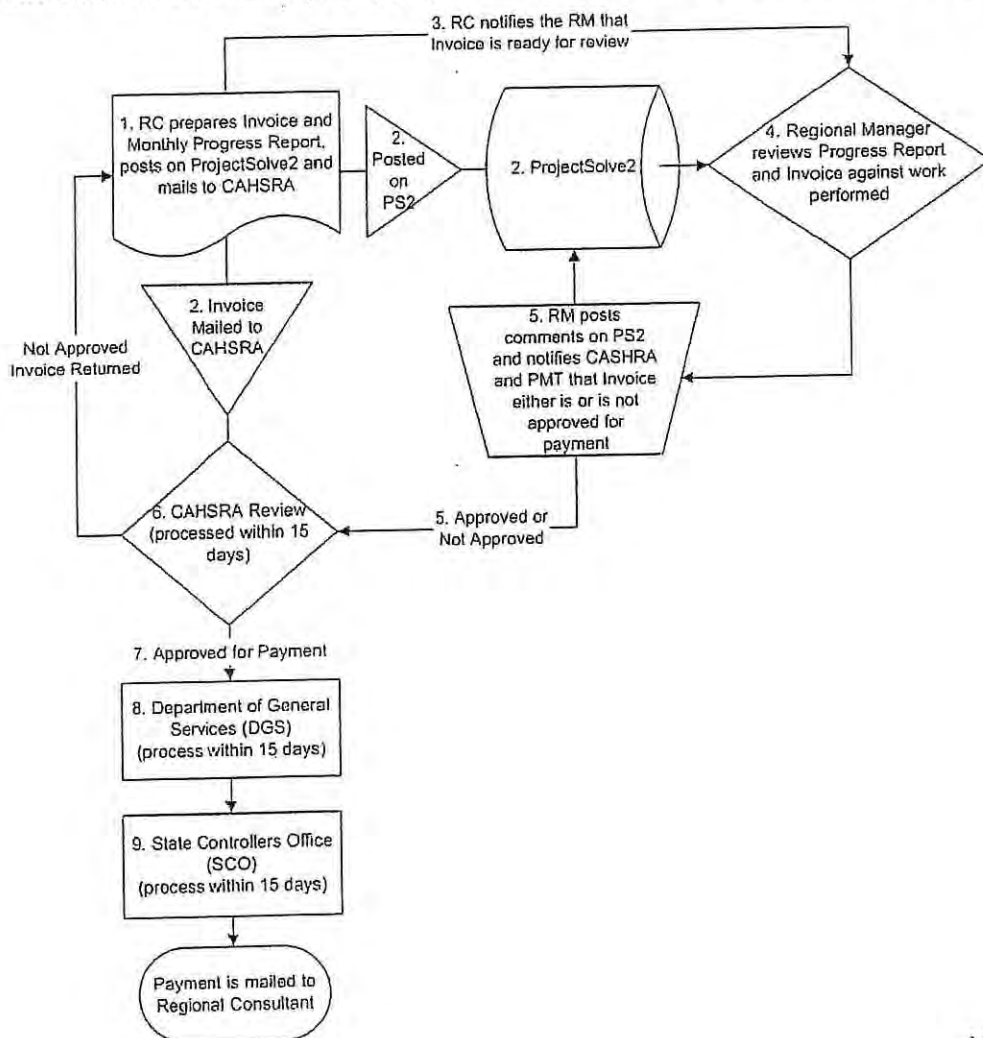
Livingston, Kris

From:	Daniels, Anthony
Sent:	Tue 12/16/2008 3:44 PM
To:	Armistead, Bruce; Spaethling, Dominic; Kennerley, Gary; Tracy, Thomas; jmartinez@cordobacorp.com
Cc:	cpourvahidi@hsr.ca.gov; Frankhuizen, Richard; 'n.brand@verizon.net'; rmejia@hsr.ca.gov
Subject:	Regional Consultant Invoices
Attachments:	

Hi all,

Although I understand you are receiving the Regional Consultant's monthly invoices, to ensure that there is some control on this process, Rosemary Mejia will be sending directly to you each month a copy of the invoice for your approval.

Just to reiterate, your approval would constitute a review of the work done against the costs charged, not the checking of the arithmetic or individual salaries, etc.

You should confirm to Rosemary once you've approved the document.

Many Regards,
Tony

INSTRUCTIONS FOR COMPLETION OF THE INVOICE COVER

GENERAL

1. The Invoice Cover consists of the following three (3) Tabs. Completion of these forms is required with each Invoice Submittal.
2. Text in green is for user input.
3. Text in blue are formulas - don't type over them unless instructed to do so.
4. Do not include this INSTRUCTIONS page with Invoice Cover.

INVOICE COVER PAGE 1

1. 'Prime Consultant' Signature is to be signed by an employee of your firm who has the authority to approve this invoice. 'PMT Regional Manager' Signature needs to be obtained prior to submittal of your invoice to the CAHSR Authority. 'Contract Analyst' and 'Financial Officer' Signatures are completed by the CAHSR Authority.
2. The values to be filled in within the 'Contract' Table are contract total values and data which has been collected from the signing of your contract. In this table include values that have occurred in previous fiscal years; all other tables to be completed within this invoice cover are specific to the current fiscal year. Also, include in this table your project total of Disadvantage Business Enterprise (DBE) and Disabled Veteran Business Enterprise (DVBE) dollars spent within your contract.
3. It is anticipated that Partial Notices to Proceed will be issued throughout the current fiscal year. Upon receipt of an NTP, list the 'Date Issued' and 'Value' of each one.
4. The input for the 'Budget' section of this table is the approved Annual Work Program value for the current fiscal year.
5. The input for the 'Authorized Budget' section of this table is the authorized value of the 'Cumulative' total of Notices to Proceed

INVOICE COVER PAGE 2

1. The information provided on this table is specific to the current fiscal year and is a summary of your and your subconsultant's fiscal year billings.
2. Currently all of your subconsultants are listed in the 'Subconsultant' Table; however if you have a particular subconsultant that is either a DBE or DVBE then remove them from the 'Subconsultant' Table and place them in the respective 'DBE Compliance' Table or 'DVBE Compliance' Table.

INVOICE COVER PAGE 3

1. The information provided is a summary of your and your subconsultant's WBS Task Totals for this current invoice.

Invoice
AWP FY 2010/2011

California High Speed Rail Authority
925 L Street, Suite 1425
Sacramento, CA 95814
Attn: Accounts Payable

Invoice Date: MM/DD/YY
CHSR Invoice No: ##
HNTB Invoice No: #######
Contract No: HSR##-##

Professional Services for: Month DD, YYYY through Month DD, YYYY
HNTB - San Francisco to San Jose Corridor
Tasks 1.00 through 9.00

Invoice Approval

CONSULTANT

CALIFORNIA HIGH SPEED RAIL AUTHORITY

Received: _____

PRIME CONSULTANT   Date

CONTRACT ANALYST   Date

Approved: _____

PMT REGIONAL MANAGER   Date

Approved: _____

FINANCIAL OFFICER   Date

C	O	N	T	R	A	C	T
Capacity:	$	-	DBE $ Spent to date:	$			-
Previously Billed:	$	-	% DBE Participation:		0.00%		
Current Invoice:	$	-	DVBE $ Spent to date:	$			-
Total Billed to Date:	$	-	% DVBE Participation:		0.00%		
% Capacity Spent:		0.00%					
Capacity Remaining:	$	-					

ANNUAL WORK PROGRAM (AWP) FISCAL YEAR 2010/2011			
NOTICE TO PROCEED (NTP) SAN FRANCISCO - SAN JOSE			
NTP #	Date Issued	Value	Cumulative
1	MM/DD/YYYY	$ -	$ -
2	MM/DD/YYYY	$ -	$ -
3	MM/DD/YYYY	$ -	$ -

BUDGET			AUTHORIZED BUDGET		
Budget:	$	-	Authorized Budget:	$	-
Spent to Date:	$	-	Previously Billed:	$	-
% Budget Spent:		0.00%	Current Invoice:	$	-
Budget Remaining:	$	-	Total Billed to Date:	$	-
			% Authorized Budget Spent:		0.00%
			Authorized Budget Remaining:	$	-

Current Invoice Amount	$0.00

Please remit payment to: HNTB at ADDRESS

California High Speed Rail Authority
925 L Street, Suite 1425
Sacramento, CA 95814
Attn: Accounts Payable

Invoice Date: MM/DD/YY
CHSR Invoice No: ##
HNTB Invoice No: #######
Contract No: HSR##-##

Professional Services for: Month DD, YYYY through Month DD, YYYY
HNTB - San Francisco to San Jose Corridor
Tasks 1.00 through 9.00

Current Invoice Consultant/Subconsultant Summary

Prime Consultant	Current Amount Billed	Prior Billed Amount	Total Billed To Date	Total Budget	Total % Spent
HNTB	$ -	$ -	$ -	$ -	0.00%

Subconsultant					
AECOM	$ -	$ -	$ -	$ -	0.00%
PBS&J	$ -	$ -	$ -	$ -	0.00%
Prointec	$ -	$ -	$ -	$ -	0.00%
Anchor Engineering	$ -	$ -	$ -	$ -	0.00%
Biggs Cardosa Associates	$ -	$ -	$ -	$ -	0.00%
BKF Engineers	$ -	$ -	$ -	$ -	0.00%
ENGEO	$ -	$ -	$ -	$ -	0.00%
ERM Group, Inc.	$ -	$ -	$ -	$ -	0.00%
Kal Krishnan Consulting	$ -	$ -	$ -	$ -	0.00%
Quality Engineering, Inc.	$ -	$ -	$ -	$ -	0.00%
Transmetrics, Inc.	$ -	$ -	$ -	$ -	0.00%
Wilson Irhig & Associates	$ -	$ -	$ -	$ -	0.00%
Apex Strategies	$ -	$ -	$ -	$ -	0.00%
Contract Government Sol	$ -	$ -	$ -	$ -	0.00%
LaPointe & Associates	$ -	$ -	$ -	$ -	0.00%
MC2 Bay Area	$ -	$ -	$ -	$ -	0.00%
Subconsultant-Total:	$ -	$ -	$ -	$ -	0.00%

DBE Compliance

Subconsultant	Current Amount Billed	Prior Billed Amount	Total Billed To Date	Total Budget	Total % Spent
	$ -	$ -	$ -	$ -	0.00%
DBE Subcons.-Total:	$ -	$ -	$ -	$ -	0.00%

DVBE Compliance

Subconsultant	Current Amount Billed	Prior Billed Amount	Total Billed To Date	Total Budget	Total % Spent
	$ -	$ -	$ -	$ -	0.00%
DVBE Subcons.-Total:	$ -	$ -	$ -	$ -	0.00%

Total Amount Due	$ -	$ -	$ -	$ -	0.00%

California High Speed Rail Authority
925 L Street, Suite 1425
Sacramento, CA 95814
Attn: Accounts Payable

Invoice Date: MM/DD/YY
CHSR Invoice No: ##
HNTB Invoice No: #######
Contract No: HSR##-##

Professional Services for: Month DD, YYYY through Month DD, YYYY
HNTB - San Francisco to San Jose Corridor
Tasks 1.00 through 9.00

Current Invoice Task Summary

DESCRIPTION			HOURS	AMOUNT ($)
	W	B	S	1.00
Labor				$ -
Travel Expense Claim (TEC)				$ -
Other ODC's				$ -
Task Subtotal				$ -
	W	B	S	2.00
Labor				$ -
Travel Expense Claim (TEC)				$ -
Other ODC's				$ -
Task Subtotal				$ -
	W	B	S	3.00
Labor				$ -
Travel Expense Claim (TEC)				$ -
Other ODC's				$ -
Task Subtotal				$ -
	W	B	S	4.00
Labor				$ -
Travel Expense Claim (TEC)				$ -
Other ODC's				$ -
Task Subtotal				$ -
	W	B	S	5.00
Labor				$ -
Travel Expense Claim (TEC)				$ -
Other ODC's				$ -
Task Subtotal				$ -
	W	B	S	6.00
Labor				$ -
Travel Expense Claim (TEC)				$ -
Other ODC's				$ -
Task Subtotal				$ -
	W	B	S	7.00
Labor				$ -
Travel Expense Claim (TEC)				$ -
Other ODC's				$ -
Task Subtotal				$ -
	W	B	S	8.00
Labor				$ -
Travel Expense Claim (TEC)				$ -
Other ODC's				$ -
Task Subtotal				$ -
	W	B	S	9.00
Labor				$ -
Travel Expense Claim (TEC)				$ -
Other ODC's				$ -
Task Subtotal				$ -
			Total Invoice Amount	$ -